plane
GRUMMAN
news

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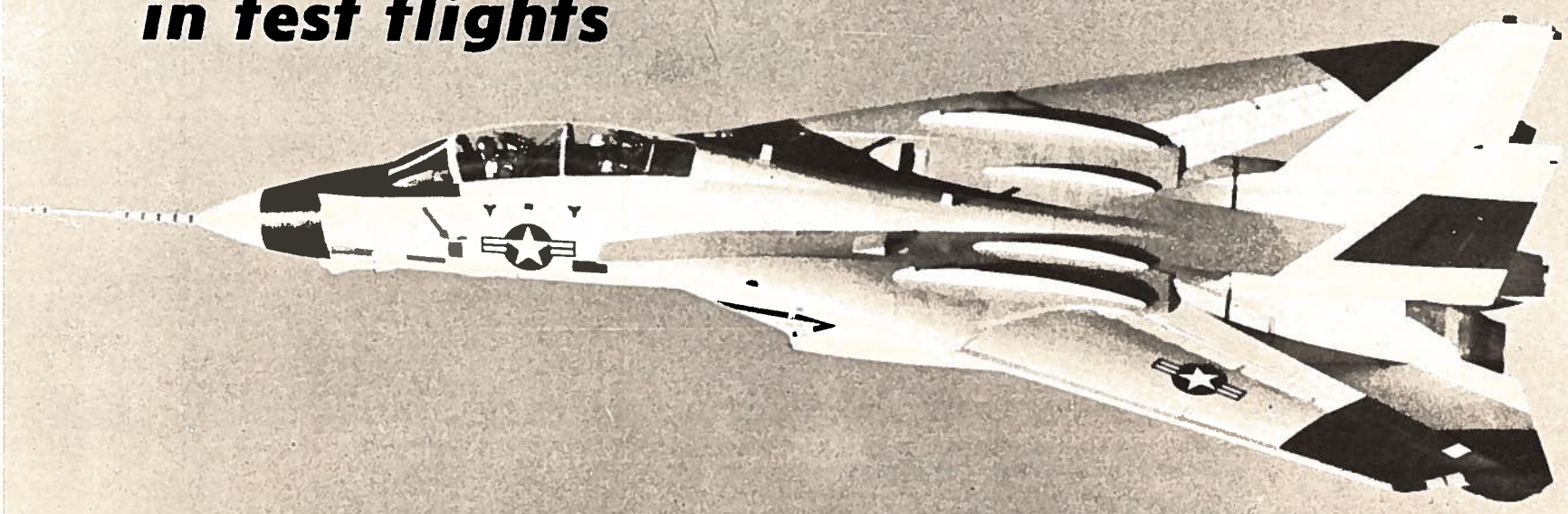
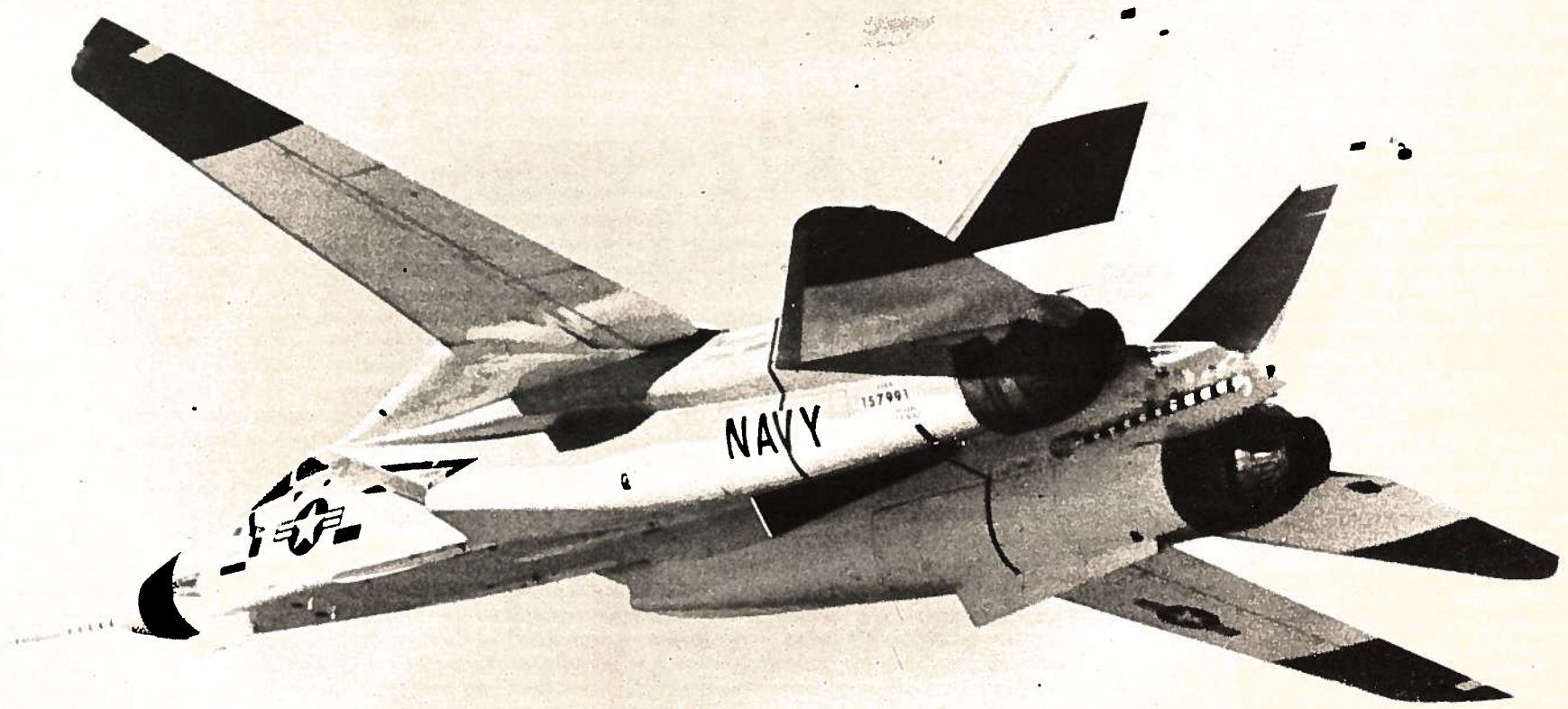
Tomcat sprints in test flights





Kelly sees further cost slashes as key factor in Shuttle decision

The Space Shuttle Program continues unabated as the design study extension contract from NASA moves toward completion November 1. After a late start, Grumman/Boeing are now on an equal footing with the winners of the Phase B study, North American Rockwell and McDonnell Douglas.

"The extension prompted us to go back and look at quite a variety of programs in order to reduce the peak annual funding," Vice President Tom Kelly, deputy director of the Space Shuttle Program, said last week. "We recently gave NASA a mid-term briefing in order to help it formulate its FY '73 budget request. It's the yearly process of generating the Federal budget," Kelly added. "I think the presentation went pretty well."

The date when Request for Proposal on the Shuttle will be issued now appears scheduled for December, and the go-ahead on design for June. "We're working now on several different design approaches, again in an effort to reduce further the cost of the Program. By November we should be back to one design and a single program plan that will meet NASA's more stringent cost limitations," Kelly said.

"We are working very closely with Boeing, and fairly large numbers of their personnel have been here lately," he continued. "There is an important cost advantage in a reusable version of the Boeing S-1C (first stage of the Saturn V), because we can make use of the existing technology and the hardware."

Funds for the Shuttle Program have been approved by Congress, by what Kelly called "a pretty overwhelming vote."

NASA visit

The National Aeronautics and Space Administration sent a NASA Technical and Business Management Practices Review Team to Bethpage for two full days in August to look into Grumman's "technical and business management practices." It was headed by Andy Hobokan, who was RASPO chief at Bethpage before he became manager of Manufacturing on the Space Shuttle Program at Manned Spacecraft Center. The group received a very thorough exposure to Grumman's internal systems and procedures, product control, inspection, shop scheduling, and many other areas.

The arrangements committee took the guests on "show and tell" visits to the shop, warehouse, and inspection areas and showed them how the systems and procedures work in practice. "They went away quite satisfied and thanked the Company for all the details," Ozzie Williams, one of the members of the arrangements committee, reported.

The same week, a NASA team dropped by for an overview of Grumman avionics in military aircraft. Howard Wright and Vice President Alex Alexandrovich welcomed them and presented a tight schedule of talks and visits to study the avionics systems of the E-2C and F-14 and commercial aircraft. They, too, are motivated by cost considerations. "Economy" is the word in every aspect of the Space Shuttle Program.

plane GRUMMAN news

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New alkaline tanks help fight pollution

Sitting in Plant 3 are two big tanks, each measuring 27 feet long, nine feet wide, and 14 feet deep—two 24,000-gallon tanks. Big, yes, but the story is not so much the size of the tanks but what's in one of them: a biodegradable, non-phosphate, non-etch alkaline cleaner.

Not very sexy, you may say. True. **But** that cleaner is not only saving the Company some $15,000 a year, it's also wiping out a pollution problem. This is the story:

Aluminum alloy sheets, just as they come from a mill or warehouse, aren't clean. Usually they're fouled by oils or stencil markings. So they're arranged on racks and dunked in the heated tank that has the cleaner. After 15 or 20 minutes, they're moved into the second tank for cold water rinse for about 10 minutes.

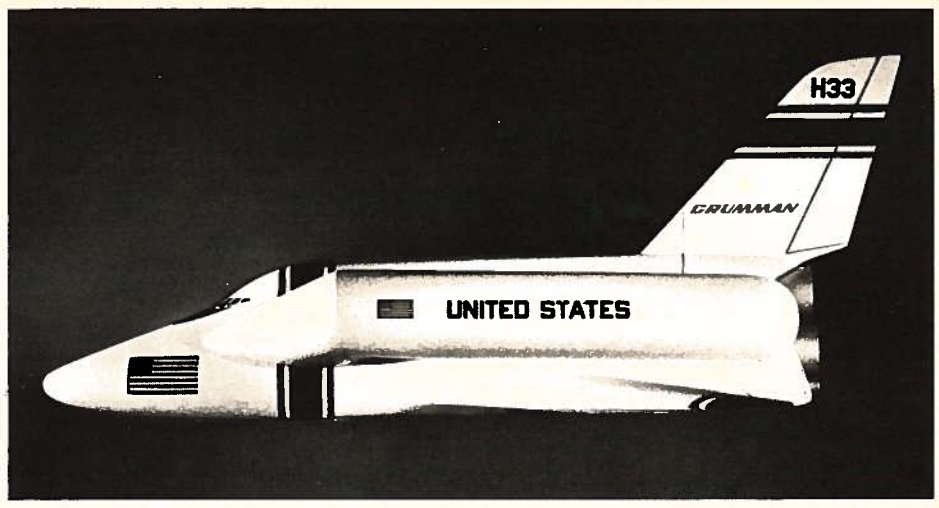
After that, they're air-dried and sent to the heat treat facility, then refrigerated and later stretch-formed.

At that point, the material is again dunked in the cleaner to remove the lubricants, and rinsed.

It's a clean, cost-saving way of doing things. "It's an easier job, too," says Bill Pagels, group leader in Chemical Engineering, Materials and Process. "It used to be that when the bath got depleted (polluted) we had to get trucks to carry it away—at about $6,000 a year. Now, since the bath is not polluted, we can drain it off without endangering the soil and environment."

New GDS post

Dave Holtje has been named director, Accounts Management, responsible for "the establishment and maintenance of an effective interface" between Grumman Data Systems operations and GDS customers. He will serve as Grumman Aerospace account manager and will manage the Operations Business Office of the Data Systems Center.



New model. **Grumman's version of the Space Shuttle Orbiter is shaping up like this. Request for Proposal is due in December. (Photo by Fred Annette)**

'Blessings be yours'

Grumman Field Service does more than attend to the military needs of an area, as witness a letter to President Bill Zarkowsky from Mrs. Judith Snipes of the China Beach Orphanage in DaNang, Vietnam.

When Marine Air Group 11 folded its tent and withdrew from the conflict, there were some supplies—two Volkswagen buses, two Honda motorcyles, a refrigerator, bedding, etc.—that were left behind by Grumman field reps and put in the custody of Chaplain R. D. Coapman. One of the buses went to the orphanage. Wrote Mrs. Snipes:

"On behalf of all the children and staff . . . I want to thank you very much for the Volkswagen bus that was recently presented to us through your field service representative, Henry A. Smith.

"With 340 children, you can well imagine that the bus will be put to good use for trips to the hospital, barber, to school, town, and numerous other places.

"Again, thank you for your kindness. May God's blessings be yours in abundance."

New show on tap

Starting October 6, visitors to the Hayden Planetarium of the American Museum of Natural History will be seeing something new—a visual presentation entitled "One Giant Step"—which concerns the history of rocketry and what the future might look like in space activity.

Last week, Dave Kaestel of the planetarium staff was at Bethpage to photograph various activities concerning space and to add to an already burgeoning collection of photographs, art, and illustrations that will form the basis of the 44-minute audio-visual presentation. Kaestel says the presentation will include about 3,000 slides. And 44 projectors and 22 different screens will provide a panoramic effect.

"One Giant Step," which is funded by the Guggenheim Foundation, will focus on these six areas: solar systems; mapping of the earth; phases and eclipses of the moon; giant "eye"; "mind' eye"; and rocketry.

It promises to be an interesting and visually exciting show—why not put it on your "must see" list for the fall.

To drill, or not to drill? . . .

The question is a stormy one:

Should off-shore drilling for oil and gas be permitted off the coasts of Long Island, New Jersey, and southern New England?

There will be a **closed** conference on the subject at the N. Y. Ocean Science Laboratory at Montauk September 13, where conservationists and representatives of the petroleum industry will appear.

Selected spokesmen from both sides will meet in **open** discussion two days later, September 15, at Grumman's Plant 35, sponsored by the Environmental Technology Seminar. The reports and discussion of the Montauk meeting will start at 5:30 p.m., a half hour after the membership meeting.

One-way ticket

You might help your boss to win a deserved award.

It's a really great idea. According to a September issue of The Wall Street Journal, there's an annual event held in Crisfield, Md., called the National Hard Crab Derby and Fair. The highlight of the affair is the winning of "the coveted title: World's Crabbiest Boss."

In a perhaps apocryphal letter by "Your Humble Servant, Jim Hyatt" of the Journal, addressed to his boss—who didn't win the "coveted title"—he moans, "So, boss, I guess you won't be among the 10,000 to 15,000 visitors here for the derby." And he puts in the kicker:

"But, knowing you, I'm sure you'll redouble your efforts to win next year."

Tomcat starts sprinting: high speed tests for 1-X

With Bill Miller in the front seat and Don Evans in the back seat, Tomcat 1-X made its first flight Tuesday, August 31. The F-14 flew for 1.6 hours.

The next day it flew for an hour and a half with wing-sweep of 45 degrees, and on Thursday it flew for two hours with maximum sweep of 68 degrees.

Both test pilots reported that the plane performed very well.

On the morning of September 3, Tomcat 2, the stall aircraft, made its first flight since installation of the stall parachute and the EPU (Emergency Power Unit). The 1.6-hour flight, with Chief Test Pilot Chuck Sewell up front and Bob Smyth in the rear, was a functional check flight. It yielded limited flight test information because of poor weather conditions. In fact, the poor visibility grew worse later in the day and knocked out plans for an afternoon flight of 1-X.

While Tomcats 1-X and 2 were in flight status (No. 2 in its 19th flight September 3), Tomcat 4 was in build-up for flight later this month and two static test articles were being tested in the north hangar of Plant 5.

"It's the first time that anyone has built two static test articles," says Don Kaley, assistant Project Engineer, Test and Operations. "The reason is that we have to complete the tests in half the time normally required—even though this is a very complex aircraft." He and Jerry McFarland, group leader in Structural Test, spoke of what's been accomplished and the test road that lies ahead:

The basic requirement, they say, is to test to 100 percent of Tomcat design.

"We made it," says McFarland. "We successfully completed maximum bending conditions for the wing outer panel, wing center section, and mid-fuselage—**but,** while holding the load, the center box failed. It simply broke. The load at which it failed was 50 percent higher than that expected in actual flight, and therefore constitutes success."

"A new center box has been installed," says Kaley, "so we can finish our testing. All testing for high-speed release has been accomplished except for the speed brake and the drop tank, which will be completed by October 15."

The main point is, say Kaley and McFarland, there will not be any delay in the static test program, or in the flight-test program.

In addition to the Plant 5 effort, wing center-section fatigue tests began September 3. That job is to duplicate all load conditions the aircraft could see **in two lifetimes**—that is, the equivalent of 12,000 flight hours. These 24-hour-a-day, seven-days-a-week tests are to be completed by early November.

'Save a million.' **Project Sterling award being presented by Vice President George Skuria (2nd R) to George Klaus (2nd L), manager of the Electronics Systems Center, is for a cost saving of $1,302,145 during 1970 in the Systems Center—top performance in Product Engineering. Norman Lewin (R) is manager of Systems Engineering, and Ed Pohlig is cost reduction coordinator for the Center. (Photo by Marie Trimborn)**

Hawkeye crew flies E-2B trans-Atlantic

Early last month, an air crew from Carrier Airborne Early Warning Wing 12 flew a Grumman E-2B Hawkeye from Norfolk, Virginia, to the carrier America in the Mediterranean. The 5,075 mile flight involved four stopovers at St. John's, Newfoundland; Lajes, Azores; Rota, Spain; and Naples, Italy. It was the first time that a Fleet Hawkeye had ever been flown trans-Atlantic for delivery to an operational attack carrier.

The journey really began at the Naval Air Station in San Diego. It was there that the Hawkeye had been converted from an E-2A to an E-2B model by installing more advanced electronic equipment, including a new general purpose computer. When its modification was completed at the Naval Air Rework Facility at North Island, the E-2B was flown to Norfolk to prepare it for its transocean crossing.

Cdr. Floyd Friesen, skipper of Carrier Airborne Early Warning Squadron 126, piloted the Hawkeye, and was accompanied on the flight by Lt. Bill Broadhurst, AT1 Charles Glass, AE2 Darrell McCray, all of VAW-126, and Lt. Cdr. Bob Duvall, staff to the commander of CAEWW 12.

Ready to go

Departing Norfolk on the morning of August 13, the Hawkeye arrived at St. John's, a distance of 1,280 miles, five hours later. Other legs of the journey were: St. John's - Lajes, 1,240 miles, 4.7 hours; Lajes - Rota, 980 miles, 3.7 hours; Rota - Naples, 1,050 miles, 3.8 hours; Naples - USS America, 525 miles, 2.3 hours.

And **now** comes what is considered the most significant aspect of the entire journey. Shortly after it landed aboard the America on August 16, the Hawkeye was refueled and ready for its first operational flight—with all systems up, and no "tweeking" or readjustment of the complex electronic gear necessary for the mission.

"But then, was that so unusual?" says Tom Guarino, E-2 director. "It had been completely operational during the entire 5,000 mile journey."

Hawkeye crew. **Prior to taking off in E-2B from Norfolk Naval Air Station, Cdr. Floyd Friesen, Lt. Cdr. Bob Duvall, Lt. Bill Broadhurst, AE2 Darrell McCray, and AT1 Charles Glass were snapped by Navy photographer. The 5,075-mile flight ended on the deck of the carrier America in the Mediterranean.**

Cover photos

Tomcat 1-X, the high-speed test aircraft, has been going through its paces—including full 68 degree sweep configuration—in the past few days, and the flight crew reports that "everything is going very smoothly." As data from each flight confirms success the envelope will be extended — and 1-X will turn on more speed in level flight. (Top photo, Dick Sander; lower, Walt Hudson)

CALENDAR of events

Notice of events for period Sept. 24 - Oct. 8 should reach Plane News by **Tues., Sept. 28.**

Amateur Radio Club: Wed., Sept. 15, 5 p.m., WA-2LQ0 Radio Shack on roof of Plant 5, bus. mtg. Emmett Goodman, Ext. 87125.

Ex-Servicemen's Club: Mon., Sept. 13, 7:30 p.m., Plt. 28 Audit., reg. mo. mtg. Vets counselor avail. every other Thurs. at Club ofc., Plt. 2. Al Kordula, Ext. 87259.

L.I. Ind. Nurses Assoc.: Thurs., Sept. 16, 7:30 p.m., Plt. 28 Audit., mon. mtg. Mary Gise, Ext. 3723.

Pure Bred Dog Club: Wed., Sept. 29, 8 p.m., John's Oasis, Hazel St., New So. Rd., Hicksville, hunt. dogs, live demon., panel of club members. Tom Williamsen, Ext. 3076.

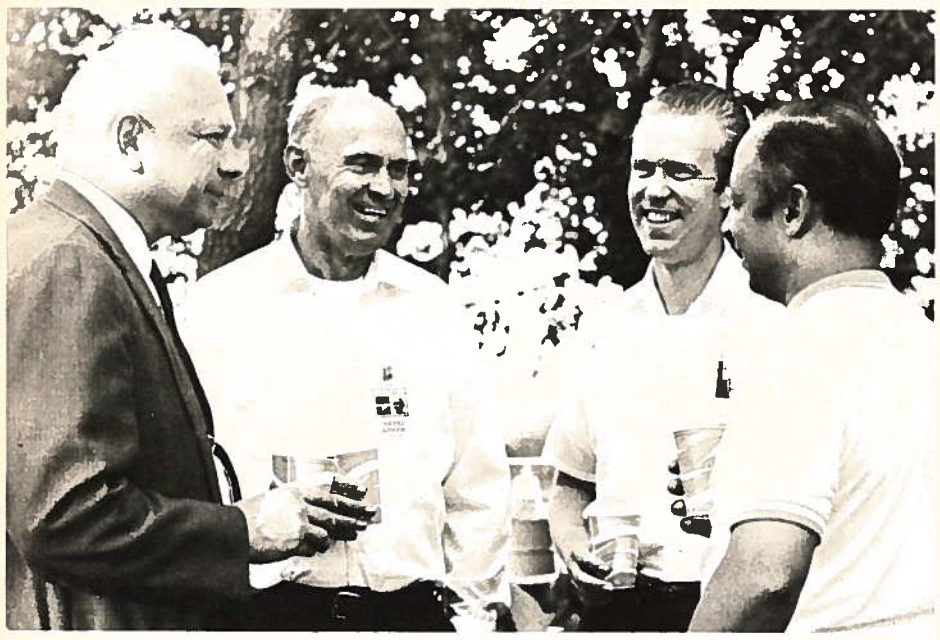
Retiree Club: Wed., Sept. 29, 1:30 p.m., Holiday Manor, reg. mo. mtg. GAA, Ext. 2133.

Rod & Gun Club: Wed., Sept. 29, 5:30 p.m., John's Oasis, Hicksville, gen'l. membership, Conservation guest spkr. Walt. Schillinger, Ext. 57-617.

Soccer Club: Wed., 4:30-6:30 p.m., practice days, Sun., Reserve Team, 12:30 p.m., Premier Team, 2:30 p.m., League & Cup competition, spectators welcome. K. Herrnkind, Ext. 3470.

Soc. of Mfg. Engineers: Mon., Sept. 13, 7:30 p.m., Graduate Ctr., Polytech. Inst. of Bklyn, Rte. 110, F'dale, V. Oliva, dir. of L.I. Professionals, on "Employment Opportunities Today." Dick Knoll, Ext. 2859.

Stamp Club (Bethpage): First 3 Wed. of month, 5 p.m., Plt. 30 Cafe., swapping, circuit bks., sales & auction. Marty Harow, Ext. 9172.



Get together. **President Bill Zarkowsky stopped by to chat with plant coordinators at a recent picnic held by Opportunity Development. Visiting with Zarkowsky here are (L to R) Bill Voorhest, Ken Crane, and Jean Esquerre. (Photo by Marie Trimborn)**

World's oldest airline?

"Is This Any Way to Run the World's Oldest Airline?" is the title of a brisk piece about six Grumman amphibians that fly, day in and day out, between Miami and Bimini. "Pappy" Chalk, 83 and the founder of the 50-year-old flying service, claims he predates KLM Royal Dutch Airlines.

The story was told by Don Bedwell and John Dorschner in Tropic, Miami Herald Sunday magazine section, and illustrated with photos of the Chalk line's ageless planes, of which there are six: four Grumman Mallards and two Grumman Gooses. The authors say that these are getting pretty scarce to buy and during the past two years, when Chalk's had to expand a little, it "had to go halfway around the world to get four Grumman Mallards at $150,000 apiece from Japan Air Lines."

The distance between Miami and Bimini is 55 miles, and the flight takes 30 minutes. "Since progress is its least important product, Chalk's has no room for stewardesses, restrooms, cocktails or snacks," the article says. Many of the passengers are wealthy jet setters. "The rich seem to enjoy our amphibians," Dean Franklin, the operator, asserts. "They are so different from what they're used to."

During Prohibition days, say the authors, Chalk found that he could turn a profit without running rum. He served as a nonpartisan, if not a nonparticipant, in the bootlegging war by carrying the good guys and bad guys alike. " 'He started flying bootleggers out to Bimini,' " chuckles Dean Franklin, " 'then flying the revenuers out to look for the bootleggers.' "

Many thanks. **Chuck Darling, Flight Acceptance test manager for the A-6, visited the U.S. Army Nike missile base at Rocky Point recently to present the commander, Capt. Frank Polis, with a Grumman Intruder model. Men of the Nike base have been cooperating with Grumman personnel during A-6 testing at Calverton. (Photo by Gerry Costello)**

Start retraining 22 engineers

Twenty-two men, selected for a program to retrain unemployed aerospace engineers to prepare them for jobs in environmental engineering, began their course last Tuesday in the Training & Development Center, Plant 39. Organized by Grumman and Manhattan College, it is sponsored by New York State and funded by the Federal Government under the Manpower Development Training Act. If you hear something about PRAESEE, it's the same thing: Program for Retraining Aerospace Engineers for Environmental Engineering.

The course will continue for 13 weeks and will be taught by Grumman specialists and outside consultants. "Over the next six months," Jack Rettaliata, Vice President of Grumman Corporation, told them at their first session, "we are going to offer you some 620 hours in classroom instruction and laboratory work in environmental engineering, chemistry, hydrology, microbiology, instrumentation and data processing, and water supply and treatment." He did not promise them jobs but promised to make available the services of Grumman's Personnel Department "to provide placement counseling and assistance in locating jobs." He said letters from consulting firms and Federal, state, and local water quality offices in the metropolitan and Long Island areas alone "indicate about 120 job openings in 1971."

Art Gilmore, director of Corporate Training & Development, noted that the students had been impartially selected for the course and thanked all in government and in private industry who had helped plan and expedite the five-month program.

Two die on field assignments

Two men died recently while on Company business: Dave Hauptman and Sheldon Pinsley.

Dave Hauptman was killed in a plane crash near Patuxent River on August 23. He and two Navy pilots were on a special test flight, checking equipment on a C-2A.

Dave, an electronics technician, was on assignment from Flight Avionics, Plant 8, to Grumman Product Support Field Service. The co-pilot was Lt. Cdr. Sam Shiverdecker, known to many at the Calverton Facility, where he had been attached to the Naval Plant Representative Office 1966-68. The pilot was Lt. Cdr. John E. McCauley. The plane went down in Chesapeake Bay three miles south of the Naval Air Test Center, Patuxent River.

Hauptman, who was 33, had been with Grumman since 1965. He lived at 32 Portside Dr., Holbrook, L. I., with his wife, Joyce, son Brian, 5, and daughter Lorie, 2.

Shelly Pinsley, deputy director of Advanced Aircraft Systems, died August 30 in Honolulu. He accidentally fell from a sixth-floor balcony of the Sheraton-Waikiki Hotel, according to police, and died about three hours later.

Dave Hauptman

Shelly Pinsley

Pinsley was on a trip that was to include a briefing with Navy officials.

A Grummanite since 1959, he became deputy director two years ago. Before that he was section chief of Preliminary Systems Engineering, a post he had held for several years.

He gained a B.S. in mechanical engineering from City College, an M.S. from Brooklyn Polytechnic Institute, and was active in professional societies.

Pinsley is survived by his widow, Barbara, two sons, Howard W. and David B., his mother, and a brother, Edward.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

DAVID HAUPTMAN of Flight Avionics, Plant 8, died August 23 at the age of 33. He lived at 32 Portside Dr., Holbrook, and had been with the Company five years.

JOSEPH R. MATTHEWS of Plant Protection, Plant 18, died August 27 at the age of 57. He had been with the Company since 1963, and he lived at 57-67 Xenia St., Corona.

SHELDON E. PINSLEY, deputy director of Advanced Aircraft Systems, Plant 5, died August 30 at 35 years of age. He had been with Grumman 12 years. He lived at 22 Netto La., Plainview.

DONALD G. GRAHAM of Propulsion Test, Plant 2, died August 31. He was 46 years old and had been with the Company since 1951. He lived at 18 Hunt La., Levittown.

WAINO W. JUNTUNEN died September 1. He was 57 years old and had been with Grumman 14 years. His home was at 1 Yonda Dr., Sayville. He worked in Final Paint.

JOHN H. BARNETT of Engraving, Plant 3, died September 5 at the age of 60. He had been with Grumman 24 years and he lived at 116 Linden St., Bellmore.

BYRON HEINECKE, foreman of Department 063, Avionics Test, Plant 33, died September 5 at the age of 57. He had been with the Company 31 years. His home was at 29 Taylor Ave., Greenlawn.

See four-engine Gulfstream as future STOL transport

A Grumman-Boeing team is at work on a proposal to design an Experimental STOL Transport Research Aircraft (ESTRA) for the National Aeronautics and Space Administration, using a four-engine Gulfstream II in a high-wing configuration. STOL refers to short take-off and landing, meaning that the aircraft will be capable of operating from 2,000-foot runways (including safety margins). The plane will be designed to employ new propulsive-lift concepts — externally blown flap and augmentor wing. These design features provide high lift and thereby permit low landing speeds. Proposals for the design phase of this program, estimated at $1 million, are due in mid-October with a contract award expected by January 1, 1972. The design phase winners will then prepare proposals for the follow-on fabrication phase for two experimental aircraft.

Two other studies

Grumman has been investigating STOL transport aircraft for several years with the intent to develop future commercial and military STOL transport aircraft, according to Gene Callaghan of Business Development.

Two other Gulfstream studies are being directed by Bill Fehrs, director of Commercial Aircraft Programs. John Swenk, Gulfstream Project, manages a lift-fan VTOL (vertical take-off and landing) G-II modification as a subcontractor to North American. Earlier this year, Stu Harvie of Senior Vice President Grant Hedrick's engineering staff, and Charlie Coppi, Gulfstream Project Engineering manager, presented to NASA a program to design and build a G-II equipped with a super-critical wing. Late last year, Grumman also submitted a 90-passenger propeller STOL transport design in response to American Airlines' request for a STOL transport. Grumman was one of the winners in this competition but subsequently withdrew to concentrate on the ESTRA program.

Seeking new market

Winning the NASA Research Airplane (ESTRA) program would be a major step forward in the development of a competitive position in the light transport market. The primary competition is expected to be the team of Lockheed/Bell Aerosystems, and McDonnell Douglas and Convair.

The proposal manager for Grumman is Irv Watman of Advanced Aircraft Systems. Both Watman and AAS Director Bill Tebo have been making presentations to the NASA centers at Langley, Edwards, and Ames, as well as to the Air Force, for the past 18 months.

The Grumman-Boeing team's proposal will be based upon the Gulfstream II airframe, modified to meet NASA's requirements for a highly versatile STOL research aircraft. If Grumman wins a contract to build the aircraft, it will be built in the new "experimental shop" to attain NASA's research objectives at minimum cost. Joe Cipp has recently been appointed to establish a low-cost, quick-response experimental shop in the Company for just such a program.

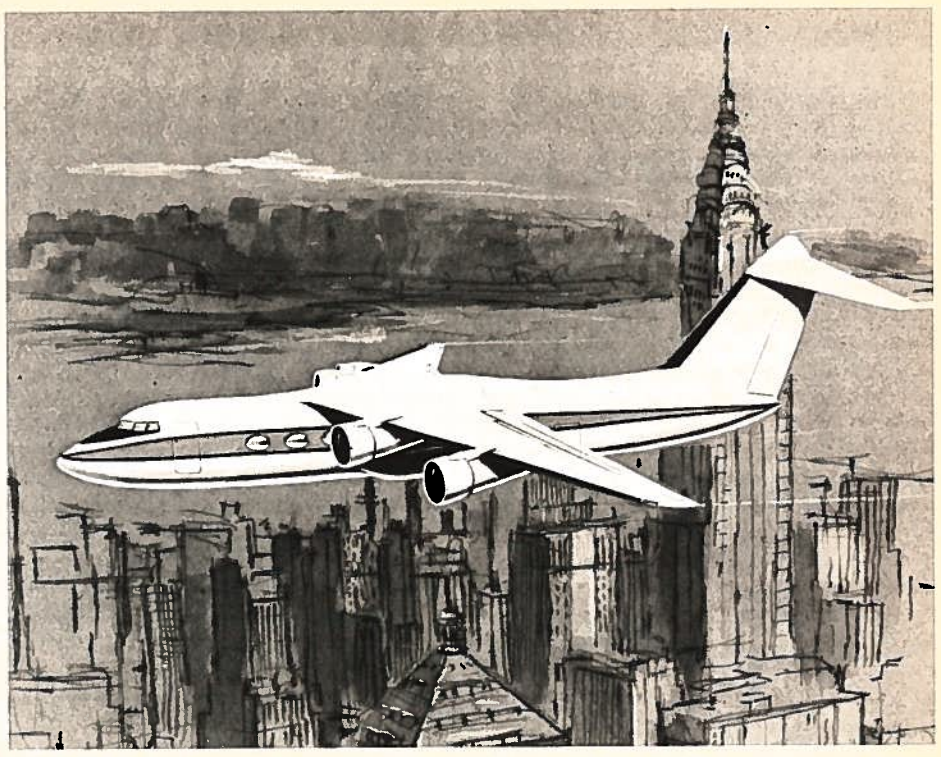
Boeing's ESTRA proposal manager is Harry Higgins of their Commercial Aircraft group. Boeing's previous and current STOL efforts include a boundary-layer-control equipped 707, an "augmentor wing" equipped de Havilland Buffalo aircraft, and a lift-fan version of the Buffalo.

Plan long usage

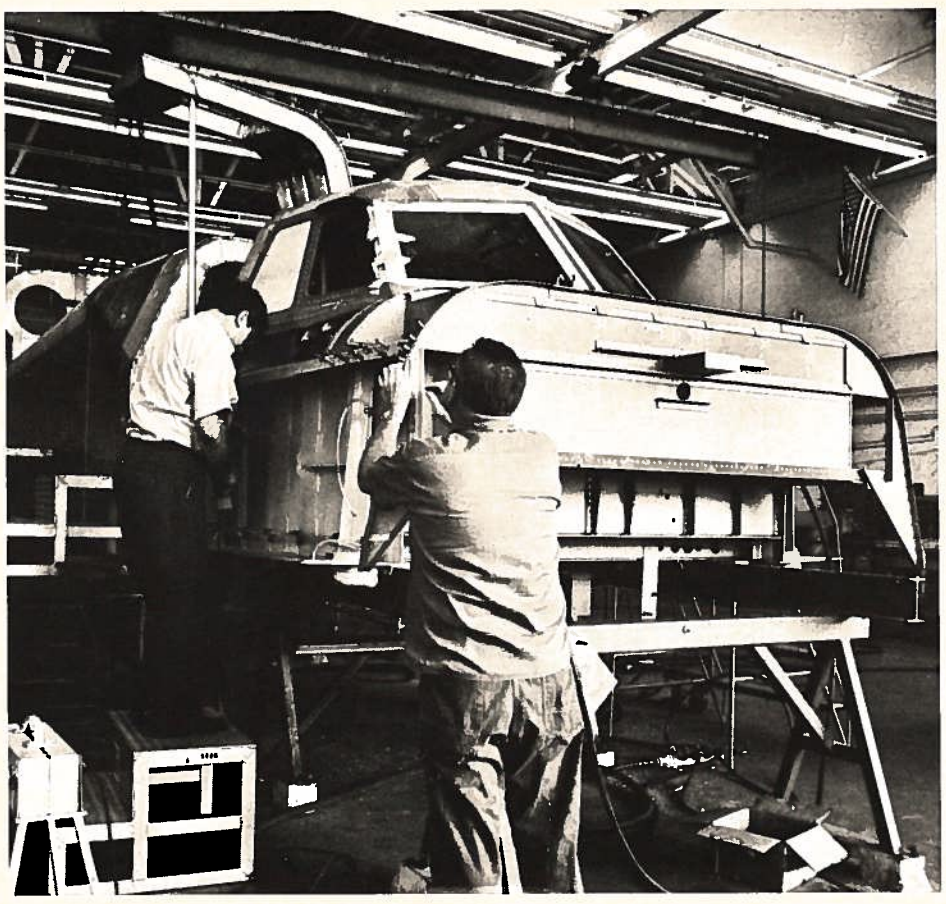
The NASA procurement plan calls for two steps: selection of two or more contractors for the design phase, and, following that, selection of one of the design phase contractors for the fabrication phase. The design phase is to be completed no later than six months from the time of contract award (approximately June 1972).

The two aircraft will be used in a NASA flight research program intended to provide the technological data and experience for developing "environmentally acceptable, economical, and safe" fan-jet STOL transport systems.

Civil Aeronautics Board studies show that short-haul transports covering distances of 500 miles or less account for over 50 percent of all domestic passenger travel by air, according to Callaghan, and it is expected that these two aircraft will remain in NASA inventory for the next 10 years to serve as the base for investigation of new high-lift concepts.



STOL aircraft. **High-wing Gulfstream II is being designed for NASA in its quest for short take-off and landing aircraft that could operate from 2,000-foot runways. Design provides high lift and low landing speed. Proposals for design phase are due next month. (Art by Craig Kavafes)**



Coming right along. **The TACRV (tracked air cushion research vehicle) being built in Plant 4 is to be delivered to the Department of Transportation High Speed Ground Test Center in Pueblo, Colo., in April. DOT would like to display it at the international exposition, Transpo/72, next May. (Photo by Fred Annette)**

CD calls for boating volunteers

The Nassau County Civil Defense Office is seeking to establish a Marine Unit as part of its voluntary Auxiliary Police organization. To join the proposed new unit, applicants must have completed the basic CD Auxiliary Police course, completed a Coast Guard or Power Squadron course, and participated in the instruction course given by the Nassau County Police Marine Bureau.

Persons interested in joining the proposed new unit should write to Gen. Otho C. Van Exel, Nassau Civil Defense Director, at 140-15 Street, Mineola, L. I. Owning a boat is not a pre-requisite for joining the unit, but is desirable. Those who own boats should advise CD headquarters what kind of boat they own, what type of radio equipment they have, and where the boat is normally located.

Civil Defense Auxiliary Police are volunteers and members of local Civil Defense organizations who are trained in police procedures by the Nassau County Police Department.

Now, the wait . . .

On August 27, Grumman submitted to NASA a detailed proposal for a High Energy Astronomical Observatory. The winner of the HEAO C/D contract will be able to proceed on January 15 with the C/D (design and hardware) phase for two spacecraft. Grumman's strong competitor for this contract is TRW.

The plan for HEAO, providing Grumman is successful, is to run the Program as a centralized facility in Plant 5: engineering and program offices, vehicle checkout and assembly. The OAO Clean Room will be used for final assembly and checkout.

Better get ready

If you have any finishing touches to apply to exhibits you plan to enter in the Grumman Hobby Show, better not put it off too long. The Hobby Show is scheduled to receive entries from October 18-20, with the display open to visitors October 21-24.

The Art & Photography exhibit is slated for November 8-14. A fuller explanation of entry rules for both shows will be contained in the next issue of Plane News.

Thinking about the future? . . .

Corporate Secretary answers some questions on Grumman Pension Plan

If you're approaching retirement and your Grumman pension becomes a vital consideration, you may begin to wonder how it has improved over the years, and how it provides for your future. Or if you're not yet ready for retirement, perhaps you question what your vested rights may be right now, or what your wife would get if you were to die before the age of 65.

Larry Rockwell, Secretary of the Grumman Corporation and a member of the Employees Pension Board, recently answered some questions from Plane News about the inner workings of the Grumman Pension Plan.

Q. We read in the press every now and then about pension funds being misappropriated or badly managed. How old is the Gruman Pension Plan and what safeguards does it have?

LR: The Pension Plan was started effective January 1943. Every year since then, there have been contributions made by the Company to the Pension Plan and the amount of those contributions each year is based on an actuarial evaluation as of the end of the immediately prior year, which evaluation advises the rate of the contribution—that is, the percentage of covered payroll that should be contributed in the following year in order to maintain a fully funded position.

Q: Does this change from time to time?

LR: This is changed from time to time depending on changes in the Plan, the average age of members of the Plan, and various other factors, such as increased payrolls. It is also affected by the mortality of both active members and pensioners.

Q: At first, spouses weren't included?

LR: That is correct.

Q: When they were included, did the Company have to contribute more money to the Fund?

LR: Well, not exactly. There are two areas where surviving spouses are concerned. Originally, the Pension Plan provided pensions only for the workers themselves, without any joint and survivor option. When the joint and survivor options were put into the Plan, in 1954, this meant that an individual who was retiring could elect either to take his full pension or he could make provisions that, in the event of his death, his surviving spouse would receive either a part of, or all of, his pension as long as she outlived him.

Now this was done in such a way that it does not cost the Company anything extra. The amount of reduction of his full pension to this lower amount to provide for her was what is known as an "actuarial equivalent." It means that the actuary was computed, that so much money is available. Now it can be paid out **either** over the lifetime of **one** person, or that same amount of money can be paid out over the lifetime of the two people. But the same number of dollars on average are going to be paid out. What it does is to insure the surviving spouse a retirement income even after the death of the pensioner.

Now the second thing that was done with respect to surviving spouses, in 1959, was a "surviving spouse benefit," which concerns a person who has attained that age and length of service where he was entitled to retire, if he wanted to, but has not retired. If he dies, and has a surviving spouse, that surviving spouse will automatically receive a pension as if he had, in fact, retired the first of the month of his death and he had elected the optional benefit.

There has been money accumulated into the fund for the man who has not died. Before we had this "surviving spouse benefit" the amount of money that had been contributed for that person reverted to the trust—and the effect of that was to reduce future contributions on the part of the Company.

If an employee dies and has not made the selection, it's automatic. Now the surviving spouse gets it. But it does "cost" the Fund, because those monies now are going to be used.

Q: Then if a man dies after 20 years of service, his wife receives a pension, even though he hasn't signed up for it?

LR: As I said before, this is automatic. He does not have to sign up.

There's another consideration. If his age and his length of service when added together (his last birthday plus his last total number of years of service) add up to 75 and he dies, she automatically gets a pension. In addition to that, if a person is age 60 and has been here at least five years (which is the waiting period), and dies, his wife will also automatically receive a pension.

Q: You have to be here five years before you can get a pension—but then you can count those years?

LR: You count them toward your vesting rights and any other areas where years of service apply although there's no contribution made during that five-year period.

Q: Could you give us a little information about how the Pension Fund is invested, and what the safeguards are?

LR: Originally and up until the end of November of 1969, Bankers Trust Company was the sole investment manager of the trust fund. They had complete discretion with respect to the investing of the Fund at that time. In other words, no one at Grumman looks over their shoulders and says buy this and sell that. They did the whole thing.

At the end of November of 1969 the trust fund was basically split into two pieces, with Bankers Trust Company retaining approximately half and the other half being turned over to John Hancock Mutual Life Insurance Company to manage. The John Hancock manages it in exactly the same way as the Bankers Trust Company manages their half. Both Bankers Trust and John Hancock report to the Grumman Corporation and to the Employees Pension Board.

Q: Is Bankers Trust responsible for the performance of the John Hancock?

LR: No. They have absolutely no relationship, one to the other. None whatever.

Q: Is that a safeguard of some kind?

LR: I think that the primary reason that the Board of Directors voted to do this (and other companies have done the same thing) is to have two different managers, where you can get a little "horse race" going. Competition. Who's going to do the better job? With competition presumably they're both going to do better. Hopefully.

Q: How is the Fund invested?

LR: The two halves of the Pension Fund are invested roughly from 65 to 70% in common stocks and the remainder in fixed income investments.

Q: Does this go for both of them?

LR: Yes. It varies, you know; there's no set percentage that they have to hold to.

Q: There have been newspaper reports of some workers who belonged to company and union pension funds, yet when the company went out of business, there was nothing in the pension fund for them. What if Grumman were to go out of business tomorrow? What could pension members expect from the Fund?

LR: We don't anticipate any such thing. But if it did happen, obviously there's not going to be enough money to pay everybody the pension that they would normally receive if they worked to 65. I can tell you that the Plan is fully funded, up-to-date and we don't owe anything to the Pension Fund.

Page 32 of the Pension Plan booklet says about discontinuance of the Plan, "the funds would be applied by the Employees Pension Board in such man-

ner as it deems equitable for the benefit of the Pension Plan members, retired members, and other beneficiaries for whose benefit such funds are held, to the extent of the reserves held for each such individual."

Q: Clint Towl, Lou Willing, and you comprise the Grumman Pension Board members. What do you do?

LR: The EPB is responsible for the administration of the Pension Plan and for carrying out the rules and regulations. It reports to the Board of Directors and recommends changes in the Plan from time to time. It maintains records with respect to active and retired Plan members, and it certifies to Bankers Trust the pensions to be paid. Also, we comply with Federal I.R.S. regulations, and file an annual report with the U.S. Department of Labor giving the financial status of the Plan, number of people in the Plan, the number of retired people, and so forth.

Q: Why don't employees contribute to the pension?

LR: Originally it was set up in January 1943, in the middle of World War II. At that time, management of the Company felt it would be better for the Company to pick up the entire cost rather than have some amount come out of the pay that the individuals were receiving. And that general philosophy has held current. Since 1965 we have had the Employee Investment Plan, which is a vehicle whereby people can supplement their pensions if they wish, by contributing to the Employee Investment Plan and having the Company match in part their contributions.

The trend, incidentally, is away from employee contributions in our type of plan. In Bankers Trust Company studies, the percentage of plans that neither require nor permit employee contributions has risen from 45% (1956-59) to 50% (1960-65) to 56% in 1970. So the trend is away from employee contribution in the so-called conventional type of plan which ours is.

Q: Senator Jacob Javits has made news by calling for reforms to protect pension funds from being mismanaged. He also champions the much-discussed "vesting" of funds to insure old-age pension payments to those who transfer to another company or become unemployed.

LR: Senator Javits wants every pension plan to provide for 10% vesting after six years of service and another 10% each year thereafter until full vesting occurs at 15 years. Now Grumman in January 1970 went to full vesting after 10 years, so we think our plan is better than the Senator's proposal. Under the vesting after 10 years of service, payments commence when the person becomes 65 years of age.

Q: If people leave the Company and have vested pension rights, how do you keep track of them?

LR: We've asked the individual who has left the Company with 10 or more years of service to keep John Ince's Insurance, Records & Benefits Department advised of his location. And to communicate. To keep current. Now, again, we'll have to cross the bridge when we get to it. We've never come to the point yet. But presumably if he keeps his address current, whoever is sitting in John's seat in the year whenever it is, 1995, say, why that person will start to receive his pension.

If he should die without attaining the age 65, then there'll be nothing paid at all.

Q: If someone were drawing a pension say, next month, would he be getting cost-of-living adjustment built into it?

LR: No, you start off with whatever your pension is. Then, on April 1 of each following year, a cost-of-living adjustment is made—provided the Consumer Price Index has changed during the preceding year. The maximum adjustment is 3%.

Q: Will you explain the latest changes in early retirement options?

LR: In January of 1971 the Board adopted changes which provided higher pensions for those people who retire between the ages of 60 and 65. As Clint Towl said in his announcement last January, "Now we feel we have made early retirement more attractive, and practical, for those with a desire or need, because of health or other personal reasons, to take advantage of this." It means higher pensions, too, for those who might want to retire between the ages of 50 and 60 with 20 years of service.

The computerized "Benefacts" folder mailed annually, in late fall, to each Grumman employee gives an up-to-date, individual report on pension and on other benefits.

Q: Is it true that your pension goes up appreciably when you get to be 64 as compared to taking it at, say, 60?

LR: There's a rough rule of thumb: the pension doubles every five years up until—well, from 50 to 60. From 60 to 65, assuming continued work, it goes up about 50%.

Q: Do you foresee any changes in the Plan?

LR: As you can see, the Pension Plan has improved quite a bit since it was first established in 1943, especially in the last couple of years with better early retirement benefits, cost-of-living increases, and vesting. Last year the Company contributed about $18½ million to the Plan. As far as future changes? The Board of Directors periodically reviews the Plan to determine how well it serves Grumman people, but I'm sure you can understand that future changes to the Plan have to be evaluated not only on their beneficial effect on Plan members but on the Corporation's ability to pay for the changes as well.

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(For answers to questions on early retirement options, eligibility, or other aspects, refer to the blue-covered Pension Plan booklet dated February 1971. For assistance on a personal basis, call Joe Placenza, Employees Pension Board staff representative, on Ext. 9179, Plant 28.)

Fate can play some funny tricks . . . funny, that is, if you're prepared for them

"They really work, don't they!"

Laconic—and accurate—is that statement by Joe Chernes of Department 099, Plant 5. The same sort of sentiments had been voiced earlier by Artie Jackson, Hydraulics, Plant 2. Both men escaped tragedy by listening to the voice of reason: In hazardous areas, wear safety glasses.

Artie had been working on a deburring machine a couple of months ago and, as he says, "Nobody had to tell me to wear safety glasses, though there were signs all over about wearing 'em. I just put 'em on."

Art Jackson

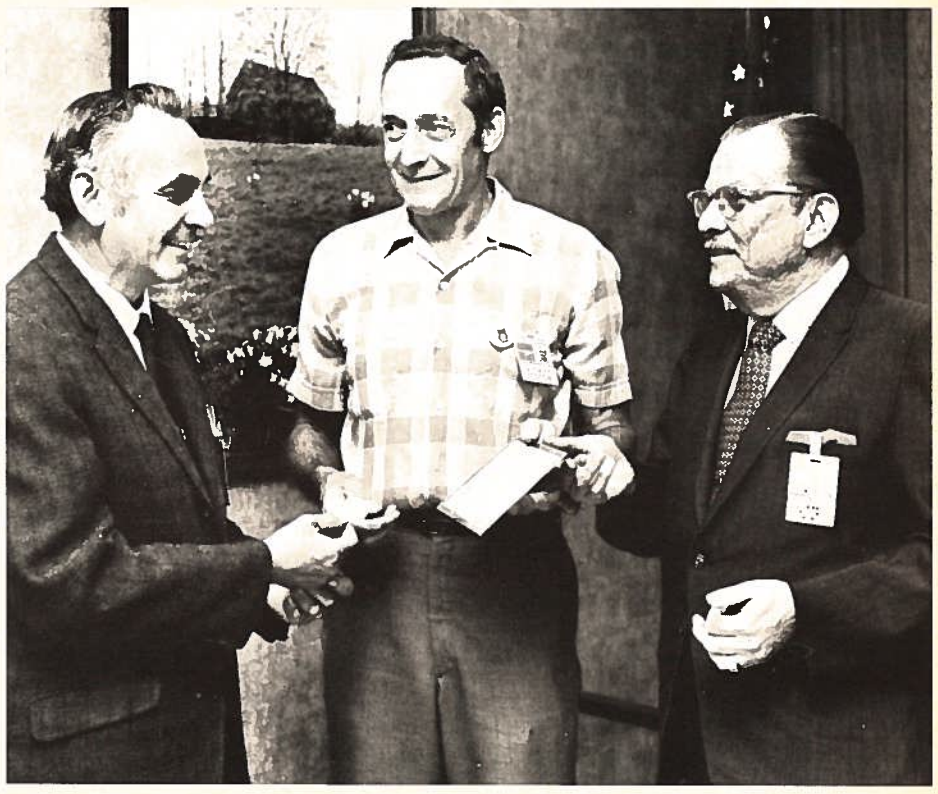
It was good that he did. A piece of the cutter broke off and ZZZZIP! The right lens of his safety glasses was smashed, yet hung together in one shattered piece.

"It was a small bit of metal, but it hit **so hard!** I didn't know what happened at first," said Artie.

In Joe's case, his job was to melt solder splices with a heat gun in order to reclaim some 20-gage wire. It wasn't long before some solder splattered and struck the left lens of his safety glasses. Fortunately, that's all that happened: Everything hit the glasses. Like Artie, the glasses saved his sight.

That's happened to three other people so far this year. Last year, there were 10 eye-saving incidents.

These two Wise Owls came eyeball to eyeball to personal disaster. Think about it . . . Is there any valid reason for **not** wearing safety glasses in eye-hazard areas?



Wise Owl. **Joe Chernes of 099, Plant 5, gets a Wise Owl certificate from (L) Walter Baldwin, manager of Plant 5, as the plant's Safety man, Bob McCartney, looks on. It was the fourth Wise Owl award this year. (Photo by Marie Trimborn)**

Soul Brothers Plus pop Boppers for Wyandanch crown

Though they were stung 4-3 in the opener of the championship series against the Boppers at Wyandanch, the Soul Brothers Plus proved that their 15-1-1 record in regular season play was no fluke by sweeping the next three games for the Plant 27 championship.

Bruce Driver, Herb Miller, Ray Lavelle, and Frank Carter got the Brothers off winging in the first game with a 3-0 lead. But in the bottom of the fifth, the Boppers came back to tie the game on clutch hitting of Walt Matuza, Hal Corley, Walt Blazejewski, and George Mancuso. And then, that superior season record didn't mean very much. With Boppers on first and second, Mancuso hit a soft liner to right, and on the wild throw-in to third, the winning run scored, giving the Boppers the first game, 4-3.

With Vin Frazitta on the mound in the second game, the Brothers put it all together as Carter poked a homer, double, and single to even up the series for manager Sherm Jacobs, 8-2. It was more of the same in the third game as Rudy Reid, Don Seagraves, Jim Martin, and Tony Alaimo paced a devastating attack in the Brothers' 11-2 victory.

In the fourth game, Frazitta doled out but four hits in a 3-0 triumph. Vic Rumore's double drove home two of those runs, with the win assuring the Brothers Plus the championship series, three games to one, and the slow-pitch title at Wyandanch.

Same old story

It was the same old story at Plant 1. The Oldtimers seemingly go on and on . . . and on. This time they put the arm on the Invaders, 9-1 and 11-5 in three-way playoff for the second-half championship at Plant 1. Who won the first half? Who else?

Art Frasca, Frank Jagiello, and Joe DeSanto socked three hits apiece to pace the 11-5 win, while back-to-back homers by Frasca and Jagiello, and three hits by Ken Smith, clinched the 9-1 victory. The Oldtimers and Misfits are scheduled to hook up in a duel for the Plant 1 title.

What a difference a year can make! Ask the Cincinnati Reds. But for the Side Lobes of the Wednesday National loop, the ending was a lot happier. In 1970, the Side Lobes finished next-to-last. This year they finished atop the league with an 11-1 record, and they're ready to improve on that mark in the championship playoffs.

In the last regular season game, the Lobes dumped Willy's Warriors, 7-4, as Joe Vosefski, Bob Savasta, Walt Grote, and Dan Avery socked two hits apiece, with Vosefski's total including a homer. Earlier, the Lobes socked the Tom Cats 11-7. Manager Bob Savasta and Joe Nieves cracked homers in that tilt, offsetting similar shots by Tom Quarto and Dom Bello of the Cats. . . . The Sloe Pokes finished in second spot with a 7-5 record, including a 10-4 win over the Vikings. Trailing 4-2, the Pokes had a man on second when the Vikings decided to set up a force play by walking Ed Montanez. You guessed it—Bob Clark poked a triple and the Sloe Pokes were off on an eight-run binge. Earlier, Bob Verzera hit one for the Pokes.

Sig Robinson's three-hit shutout—his team got a couple of hits in an 18-0 rout of the Egg Beaters—kept his team in contention for a playoff berth in the Wednesday American circuit. Unloading on the Egg Beaters were Jerry Dieterich, Jim Eckert, and Hal Roth. Dieterich smacked four hits, including two homers, Eckert went 4 for 6, including a round tripper, and Roth collected four hits, too.

In other American league tilts, the Tac Jammers couldn't get untangled as the Digits took a 10-3 game with help from Bob Schmidt and Sal Iaccarino, who hit homers. It was the 11th straight win for the league-leading Digits. . . . The Tac Jammers had better luck in an earlier game agaisnt the CBA Stars. Marty Martinez crashed two doubles and a triple, and John Kennedy tripled as the Jammers cemented their second-place spot on an 8-2 record. . . . The Digits turned out the lights on the CBA Stars during a 25-4 romp as Jim Casey (2), Gene Lowe (2), Charlie McLaughlin, Iaccarino, and Bob Emberton all crashed homers. Ouch!

In the Tuesday National loop, the Titans chalked up their ninth straight win, a 9-8 squeaker over the Druids, to finish atop the standings with a 10-2 record. Gordon Bell's homer paced the victory over the Druids, while homers by Larry Hill and Bob Verzera in an earlier 22-16 marathon over the Mohawks were supplemented by heavy sticking of Mickey Rowles, Lou Cotignola, and Jack Ferrante.

Perfect record

It's all over in the Tuesday American circuit. Simulation took the regular league chase with a perfect 11-0 record, the last win coming against the Digital Dynamos, 14-1. In that rout, Glenn Spacht and John Slonaker socked homers, while Paul Baritz, Art Frasca, and Charlie McLaughlin contributed three hits each. . . . The Woodpeckers took second place in the loop with an 8-3 mark, insuring that position with 11-7 and 9-1 wins over the Mets and Dacs, respectively. Lou Carpione's grand slam highlighted the 11-7 victory.

There was some solace for the Rangers in the Thursday after-hours loop—they stopped the Shadows 12-10 in the final game of the season to hang on to third place, and then came back to smack the second-place Hustlers 7-2 in the first game of the championship playoffs. Against the Shadows, Jim Casey led the hit parade with four singles, while team mates Bill Diercks and Pete Vitteritti had three apiece. Mike Gabriel paced the Shadows.

Soccer start

It's boot time!

On the 26th, at 12:30 p.m., the Grumman Reserve soccer squad will be at Plant 3 field to kick off the new season. Two hours later, Grumman's first-line team will be tangling at the same field.

The squads will be matched against Rocklyn's reserve and first-line teams respectively. The season ends in May.

Joe Campisi is the fellow who has the full scoop on soccer activities, and he's put out an alarm: "We need more men!" Give Joe a call on Ext. 1134 for information.

Roll off. Bocce is getting a big play at Plant 1 these days as 60 players on 10 teams are hooked up in a lunchtime league. Modondas and Maintainability are battling for title. (Photo by Fred Annette)

Bowling season underway

More than 300 teams in 26 GAA-sanctioned bowling leagues rolled into a new pin season last week. There will be action every day of the week (except Sunday) in the GAA loops, with Tuesday proving the most popular—nine leagues swing into play each week on that day from Syosset to Patchogue.

Although the following list of bowling leagues has been supplied by the Athletic Association, some of the loops are not completely staffed with bowlers. Should you want to bowl this season, pick out a league that satisfies your free time schedule, and call the contact listed. There may still be time to get hooked up with a team.

(All the times listed are p.m. except as otherwise noted)

League	Time	Lanes	Contact	Ext.
Monday				
Blue	6:45	Jericho	Nick Maresco	84373
Classic	5:30	Jericho	Nick Malandro	57-143
Gray	5:45	Syosset	Don Ragas	6107
Masters	5:30	Woodbury	Jerry White	2018
Red	6:30	Woodbury	Ed Burkhardt	84758
Tuesday				
Brown	6:30	Woodbury	Rick Hachmeister	84523
Century Mixed	6:45	Century	J. Vanderwetering	7907
Hawkeye Mixed	7:30	Syosset	Joe Kelling	3112
Mohawk	6:30	County Line	Jim Sherry	3658
Outsiders Mixed	6:00	Farmingdale	Pam Seymour	2980
Patchogue Mixed	7:00	Patchogue	Gene Burgess	1347
Structural Test	5:15	Plainview	Fred Zimmerman	2275
Syosset Mixed	6:45	Syosset	Stan Nilsen	57-883
Woodbury Mixed	6:55	Woodbury	L. DeGaidano	2844
Wednesday				
Black	7:00	County Line	Ted Dija	9385
Classified	5:40	Syosset	Bob Dudonis	84007
Gold Mixed	6:45	County Line	Martin Roche	84566
Rocket	6:45	Woodbury	Rich Bereis	1503
Thursday				
Accounting	5:30	Plainview	Joe Coffey	2914
Bearcat	7:00	Commack	John Benz	2619
Blue Mixed	6:00	Syosset	Ed Anderson	84858
Hawkeye Mixed	6:00	County Line	Sue Gerlick	2392
Friday				
Aerospace	5:00	S. Levittown	Art Conchilek	3784
Avionics	4:30	Syosset	Joe DeLucia	86840
Hellcat	5:15	Woodbury	Ken Gutekunst	86358
Saturday				
Nite Owls	1:30 a.m.	Syosset	Rudy Dunkley	84317

Gophers still collecting rifle honors

In July, the Grumman Gopher Rifle team was well represented at the Connecticut State Small Bore Rifle Position Regional Match held in Wallingford. Joe Moks took third place, Master Class in off-hand position; Hank Womble, third place, Master Class in prone position; Joe Anckner, second place, Expert Class, prone position; and Warren Block, second place, Sharpshooter Class, sitting position.

As good as the Gophers are, they're eager to get new members (women, too!) who might be even better. Don't worry if you've never held a gun before. Experts on the team train you in the care and use of a target rifle. Then it's up to you. The team meets once a week for practice and they also compete in the Long Island Industrial and South Shore leagues.

Special guest. George Titterton, retired Senior Vice President, is center of attention at recent Women's golf league dinner held at Bethpage State Park. Titterton returned the compliment later by presenting awards to individual and team winners.

Women mark end of tee loop; varsity golfers finish first again

It was the night before Hurricane Doria blew into town that about 30 members of the Women's Golf League got together for cocktails, a buffet dinner, and an awards presentation. As though in deference to the ladies, Doria held off long enough to assure a surprising break in the weather—it had been pouring most of the day—so that festivities could proceed as planned.

And retired Senior Vice President George Titterton was on hand to provide humorous anecdotes and serve as informal master of ceremonies—the girls have been asking him back since he first attended about four years ago—while, with Mike Cherry of GAA, presenting trophies to the prize winners. It was a fun affair.

Winners in the two-division league were: (Wednesday) first—Elvira Mollenhauer and Dot Todd; second—Vi Smith and Lena D'Amico; low scorer—Bertha Siegl. (Thursday) first—Alice Kehoe and Jerry Cook; second—Rose Canales and Helen Greiff; low scorer—Muriel Leighton.

In all there were 16 teams participating in the league. And just in case you have any ideas about how welcome they are at Bethpage State Park, Bob Beck, who heads the staff there, was on hand to greet them and extend an invitation to come back next year. Fore!

Clinch crown

Although surprised by a 4-4 tie with Republic in its final match of the L.I. Industrial golf league, the Grumman varsity squad still finished the season undefeated—eight wins, one tie — and clinched its ninth team title over the last 10 years.

Tony Cisco finished with a three-over par 50 for 12 holes on the Bethpage Black course, which included two birdies.

Myers out front

In the Business Office circuit, Mike Myers finished with 37 (two over par) at Dix Hills, then came right back the following week with 38 to lead the field in scoring. Other highlights were John Kempey's 43, Bill Mullin's 44, and Joe Sherry's 44. Myers turned in three birdies during the two rounds: on the par-4, 305-yard third hole, the par-4, 325-yard sixth hole, and the par-4, 280-yard seventh. Bob Halloran scored a bird on the par-4 fifth, and Kempey collected one on the third hole.

Carmine Vitale slipped to a 43 the second time he played the first nine holes of the Green course at Bethpage State Park (he carded 40 earlier in the season) but it was still good enough to take Runamuck scoring honors.

Tennis team vies for Industrial title

The Grumman varsity tennis team, seeking an unprecedented ninth straight Long Island Industrial League Championship, reached the finals of league competition last week by defeating LILCO 5-0 at Hempstead Lake State Park. Grumman will next play Sperry, semi-finalist victor over Republic, for the league title.

Captain Fred Hermann and Tom Guarino paced the Grumman attack, overcoming a second-set surge by their opponents to win 6-3, 1-6, 6-3. The father/son doubles team of Val and Al Kirillin routed their opposition 6-1, 6-1. In a match threatened by darkness, Bill Wenzel and Jacques Crouzet-Pascal prevailed 6-2, 4-6, 6-4. John Hsu and Andy Kaufmann won 6-2, 6-1 as did Gerry Fogel and Joe Di Stefano, 6-0, 6-0.

Car Pool

GLEN OAKS: Or Bellerose, Queens, to Plt. 25 or 5, 8:12-4:42 p.m. 212 479-0508.

BRONX: To Bethpage. M. Danin, Ext. 1395.

CTRL. JERSEY: Via S.I., Belt Pky., So. State to Plts. 5, 25, or 4. Nick Giovanos, Ext. 9605.

CONCORD VILL. APTS.: Hawthorne Ave., C. Islip to Plt. 15. Joe Nastasi, Ext. 1395.

SAYVILLE: To 34 complex, join or form. LT 9-3170.

Ride Wanted

LONG BCH.: From Sta. to Plt. 2. GE 2-3311.

W. ISLIP: Nr. Good Sam, 8-4:30 p.m. MO 9-0457.

Riders Wanted

BKLYN.: Knapp St., Belt Pky. to Grumman, 8:30-5 p.m.

Wanted

TIRES: & rims, 2 ea. snow and reg., '66 Chevy. sta. wag. 921-1895.

TRAINS: Lionel, of any age. 727-2257.

HOCKEY EQUIP.: For son enter. league play. PE 5-4480.

CLARINET: Used. 931-2934.

For Rent

ROOM: W. Islip, furn., pvt. ent. & bath. JU 7-5238, after 6.

CHAIN SAW: 18 in., day or wkend. rates. JU 4-6633.

APT.: New. furn., S. Huntington, liv. rm., bd. rm., den, eat-in-kit., full bath, suit. 2 adults, $225/mo. HA 3-9237.

HOUSE: W. Sayville, 3 bdrm. ranch, fenc.-in yd., bsmt., gar., furn., appli., $240/mo., avail. 10/15. 567-0860.

ROOM: 2 mi. Grumman, bath, bus. woman pref. WE 1-2567.

APT.: Lake Ronkonkoma, 3 rm., pvt. ent., bus. couple only. JU 5-6020.

ROOM: W. Farmingdale, semi pvt. bath, lrg. cedar closet, gent pref. CH 9-2873.

For Sale

RACEWAY: 50 ft. trk. Aurora, controls, access. & scenery. VA 5-1186.

RAINCOAT: Lady's, sz. 10-12, full zip. pile lin., quilt. sleeves, $10. 289-1661.

FENCE: 40 ft. 42 in. chain link, grn. plast. coat. HA 7-5271.

CITIZENS BAND: Lafayette Comstat 25A/tuner, 2 base microphone/colinear II omnidirectional ant./ mobile bracket/50 ft. base cable, 10 ft. mast/ mobile 96 in. fbgl. ant. & cab., $150. 935-0429.

BABY CARR.: Bilt-rite coachette, reason. 212 479-0509.

BABY CARR.: Navy blue coach, fold. frame & lift-out coach, $30. 666-6138.

LAWNMOWER: 26 in. Craftsman riding, 6 hp, 13.5 cu. in., 4 cycle #96270, fwd., neut., rever., clutch-bk. ped., 5 cut hgts., 2 yr. 30 in. #79963 sweeper w/hitch, both $225. 757-5821.

MISC.: 21 in. reel lawnmower, $20; 38 in. elec. range, nds. oven thermostat, $30; 20 in. home made motor bike, twist grip controls, bks., 2½ Briggs eng., $25; 18 in. Sears lawnmower, $20. CH 9-4884.

LAWNMOWER: 22 in. rotary Craftsman, self-prop., has slight leak, nds. oil seal, $20. 681-9588.

MISC.: 12x12 scrn. canopy, Hetterick, used 1, $60. 473-7295.

TBL.: Kit., ext. & 4 pad. chrs., gray tp., $40. JU 1-3125.

KIT. SET: 6 chrs., wood grain tp., $50. HR 3-4732.

PATIO SET: Wh., wrought iron, tbl. & 4 chrs., 3 yr., uphol. cush., $75. 586-6152.

RANGE: 40 in. elec. wh. Hotpoint, new, $50. 822-0842.

BDRM. SET: Cordovan mahog., 2, 81 in. dbl. dressers w/tps., 4x6 mirror, dbl. hdbd., 2 nite tbls., $200. WE 8-4793, after 6.

CASTRO: Navy blue corduroy conv., 67 in. lg., $290. OR 1-5878.

BREAKFAST NOOK: 3x6 w/5 ft. match. formica tbl. & 2 match. chrs., $190. 822-1088.

MISC.: 21 in. B&W swivel cons. G.E. TV, $15; 5 pc. kit. set, grey marble, formica tp., 30x60 w/leaf, $35. PE 5-7082.

For Sale

ELEC. IRONER: Thor, flatwork, folds to 1¾ sq. fl. area, $10. 757-0438.

MISC.: Household items, baby stroller, Aurora trk., games, etc., will sell sep. 878-2775, after 6.

BATHTUB: Beige, $30. 731-2523.

EVERGRNS.: Rhododendron, andromeda, hemlock, scotch pine, etc. RA 8-4914.

CHANDELIER: Crystal, 5 lgts., best offer o'$35. 587-3203.

TAPE RECORD.: AKAI milti-hd., dual amp., 4-trk. stereo & mono. multi trk., var. spd., camera sync., dual spkrs. ext., 2 mikes & adapt. kit., $200. 744-2056.

MISC.: ½ hp circular tbl. saw, 8 in., steel std.; ¾ hp Rockwell prof. wood lathe; sma. ¼ hp match. lathe, 3 in. chuck,; misc. auto. tools. 724-0270.

MISC.: 24 in. Schwinn boy's bike, $18; 26 in. boy's new hvy. dty. Columbia bike, $55; 13 element Channel Master TV antenna. 724-1329.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.

Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

ACCORDION: 120 bass Muzzi, 3 switch, blk. & silver, mother of pearl keys, case & sheet music, $100. 265-1930.

HEAR. AID: Sears mod. 8071, can attach to eye glass frames (incl.), reason. 757-0863, evgs.

STEREO SYS.: Comp., Harman-Kardon, FM stereo rec'vr., HK-20 spkrs., Garrard turntbl., Pickering cart., $250. 368-4718, evgs.

CAB. CRUISER: '49 Chris Craft, 26 ft., twin 95 hp inbds., hd., galley, dinette, bunks for 3-4, dbl-plank. mahog. hull, $1,295; elec. winch, 500 lb. cap., $35; 3 hp elec. motor, 110/220V, sgl. phase, $35. 541-2835.

BOAT: 16 ft. fbgl. open boat w/50 hp Mercury outbd., Navy tp., $975. 226-8566.

BOAT: '68 Cobia, 17 ft. fbgl., 55 hp Johnson, less than 50 hrs., $1,400. 799-5945.

HOUSE: West Hempstead, 50x175, comp. panel, carpet., intercom sys., lrg. liv. rm. w/firepl. & beam ceil., 3 bdrm., country mod. kit., din. rm., fin. cabaret bsmt. w/kit., patio, 15x30 blt.-in pool., alum. trim., s-s, 2 refrig., xtras, $37,500. IV 9-2945.

HOUSE: Wantagh, Forest City, 4 bdrm. Cape, o'sz. gar., cov. patio, fin. bsmt., 2 zone heat, dutch dormers, appli., xtras, low 30s, prin. only. PE 5-6791.

HOUSE: Sanford, Fla., 2 bdrm. ranch, Fla. rm., carport, corner 10t, 100x102, lrg. fruit trees (orange & grapefruit)), ask. $12,500. LT 9-3507.

LAND: ½ acre Pocono area, 5 lakes, wood. plot, ski priv., 3 hr. from N.Y. MO 7-2960.

HOUSE: Roslyn Hgts., leg. 2 fam., mother/daugh., 6 bdrm., 3½ bath, 1/3 acre, firepl., w-w, mid. 70s. 484-0381, after 5.

WAGON: '64 Chevrolet Impala, V-8, auto., pwr. steer., rack, posi, w/w, snows, 73,000 mi. 751-1256.

CORVAIR: '67, auto., 110 hp, no oil leaks, $675. JU 5-8992.

PONTIAC: '68 Firebird 400 conv., 4-spd., posi. 427-7735.

PLYMOUTH: '70 Roadrunner, 383, auto., air grabber, air shocks, Keystone cust. classic whls., pwr. steer., xtras, $2,700 or bert offer. 694-5875, after 5.

PONTIAC: '70 Catalina, 2-dr. hdtp., vinyl roof, air cond., 4-whl. pwr. disc bks., pwr. steer., vinyl int., cust. group., radio, gold & sandalwood, snows & xtra whl., rims, $2,675. LO 1-8585.

FORD: '66 Mustang, V-8, blk. vinyl hdtp., gray. OV 1-2317.

AUSTIN HEALEY: '66 Sprite, new tp. & bks., 4 new tires, cust. wood dash, $695. WE 8-3417.

VW: '68 Fastback,, $1,500. WE 5-5081, bet. 9-4 p.m.

CAMARO: '67 conv., 327 c.i., new H60 & wide oval tires, xtras, $1,650. 298-5966.

For Sale

PUPPIES: Germ. shep., AKC, 1 wh. male, 3 blk. & tan fem., temp. shots, wormed, $100. 798-5252.

PUPPIES: German shotrhaired ptr., AKC, champ bred, show & field qual., $125. FO 8-3318.

WATCH: Man's, Jaeger-le Coultre, auto., alarm, never used, $99. 799-1360.

MISC.: 9 ft. prof. pool tbl., hvy. dty., 1-1/16 in. slate; bed comp. w/access., $450; elec. guitar w/amp., $100. 724-7571.

BICYCLE: 20 in. boy's Rollfast, blk. w/chrome fenders, banana seat, hi-rised handlebars, $25. 285-5252.

ELEC. GUITAR: 2 pick-up Telestar, amp., cord, case, $50. 585-8025.

VIOLIN: 4/4 sz. Carl Hoffner, Germ. make, case, $50. 799-5636.

ALTO SAX: Pink gold w/case; clarinet, wood, w/case; C melody sax w/case. 261-8289.

PONTIAC: '66 Catalina conv., pwr. steer. & bks., low mi., nds. tires, ask. $1,100. 822-2535, after 4.

WAGON: '65 Dodge, 6 cyl., auto., $575. MO 6-0889.

CORVETTE: '67 conv., 327 c.i., 350 hp, maroon w/blk. tp., 4-spd., AM/FM, wide ovals, burg. alarm, $2,100. 826-8970.

WAGON: '62 Rambler, std. 6 chassis, R&H, 65,000 mi., cracked block, orig. owner, $40. PE 5-5282.

VW: '66 blue, new w/w, batt., muff., & front end, radio, 58,000 mi. 421-3792.

WAGON: '65 Chevy, auto., pwr. steer., $650. LT 9-2558, after 5.

TOYOTA: '70 Corona Mark II, auto., AM/FM, pwr. bks., recent. tuned. MO 9-5814.

BONNEVILLE: '65, gray w/blk. vinyl tp., air cond., pwr., $700. LI 1-5760, after 5:30.

VW: '68, auto., 21,000 mi., ask. $1,200. 212 VI 8-2128.

VW: '61 Bug. 265-081.

PORSCHE: '66, 911, rebit. 6 mo., grn. w/blk. int., $3,200. 724-2316.

DATSUN: '67 sport, 1,600 cc, red conv., 41,000 mi., R&H, lug. rack, reason. LO 1-7896.

PLYMOUTH: '70 Road Runner, 383, hi-perf., 2-dr. couple, pwr. steer. & bks., auto., 5 new poly tires, ask. $2,250. 585-6447, after 5.

CHRYSLER: '67 Newport. 4-dr., low mi., air cond., pwr. steer. & bks., $1,395. 893-1433.

PONTIAC: '62 Tempest Le Mans sport cpe., bkt. seats, 4-cyl., auto., inspected, $150. JU 7-0424.

DODGE: '68 Monaco, air cond., vinyl roof & int., low mi., R&H, lgt. group, $1,550. 433-9842.

PONTIAC: '68 GTO conv., new tp., 4-spd., stereo tape deck (fact.), pwr. bks. 884-3512, after 6.

TV: 21 in. RCA, B&W., cons., ask. $35. 249-8151, after 5.

MISC.: Furn., household effects, gar. & garden equip., Sept. 2, 3, & 4. 929-4503.

MISC.: Pedestal mahog. din. or library tbl. w/1 leaf, $50. TA 6-3137.

MISC.: Breakfast nook, 3x6 ft. w/5 ft. match formica tbl. & 2 match chrs., $190. 822-1088.

WASHER: Norge wringer type, $10. 261-3627.

TV: 19 in. port. B&W RCA, $80. TU 8-8954.

TV: 18 in. port. Penneycraft, B&W, nds. adj., $30. 751-6830.

BDRM. SET: Queen sz. bd., dresser, mirror & chest, $125. 212 372-5173.

JR. DIN. SET: Lgt. wood, mod., 51x35 tbl., opens to 63 in., china closet, 15x36, 6 chrs. just recov., $100. PE 5-5256.

KIT. SET: 5 pc., tbl. w/ext. & 4 pad. chrs., gray, $40. JU 1-3125.

For Sale

PIANO: Wurlitzer, wal. cons. 757-4774.

MISC.: Liv. rm. tbls., drk. gray, mod., formica tps., 1, 48 in. lg. kidney shape; 1, 2 tier 18x30; 1, 2 tier corner, 30x30, $20/ea, all for $50; 40 in. hi. driftwood lamp, $25. PE 5-5256.

BOX SPR.: & matt., 2 sets, $35. OV 1-4346.

POOL TBL.: 4x8 flat comp. surface, recent. recov., balls, cues, bridge, xtras, ask. $75. 732-8825.

BABY CARR.: Coach type, stor. cov., carryall incl., $40. PE 5-5261.

MISC.: Baby's basketweave dresser, wal., $10. 427-1946.

MISC.: Wh. Edison crib & matt., bumpers, $35; fold. hi. chr. & booster, $11; Navy blue Blt-rite wint. carr. & matt., conv. to car bd., $35. 368-1819.

COACH: Blt.-rite w/hnd. paint. flowers on wh. bdy., match. bag & matt. 212 939-8875.

BABY CARR.: Coach type, grn., $25. 265-3463.

VW: '70 Notchback sed., 1600 series, 1,300 mi., $1,750. MY 2-5126.

GALAXIE: '70, vinyl sports roof, pwr. steer., 351 c.i., V-8, w-w, yel., blk. tp., low mi., $2,450 or best offer. 585-4798.

STA. WAG.: '64 Chevy Impala, pwr. steer., auto., V-8, $350. JU 4-7348.

OLDSMOBILE: '65, F-85, 4-dr., 8 cyl.-pwr. steer & bks., auto., wh.-red int., new snows, R&H. MY 4-5462.

OLDSMOBILE: '65 Cutlass, 4-dr., air cond., R&H, auto., pwr. steer. & bks. 212 848-5846.

OLDSMOBILE: '68 conv., 442, auto., pwr. & steer. & bks., mag whls., air cond., 20,000 mi., $2,500. 586-4576.

CORVETTE: '62, 2 tps., 4-spd. Hurst, new stock exh. sys., 250 hp, 3.36 posi-rear, 60 series tires on Z-28 rims, $1,750. JU 5-8992.

CORVAIR: '65 Monza, std., R&H, $375. 928-0840.

VOLVO: '68, 142, auto., 27,000 mi., xtra set of snows, $1,700. MO 5-3129, after 7.

GTO: '68 conv., stick shift, 4-spd., pwr. steer. & bks., blue w/blk. tp., $1,500. 334-8461.

CAMARO: '69, yel. w/blk. vinyl roof, blk. int., 327 auto., RS equip., retrac. hdlgts., new bks., front end align. & bal., orig owner, 44,000 mi., R&H, w/w, xtras. 221-9259, after 5:30.

WAGON: '61 Comet, auto., 6 cyl., new bks., inspect., $250. 543-1565.

PONTIAC: '69 Bonneville, 2-dr. hdtp., drk. grn., air cond., pwr. steer., bks., & wind., w/w, 2 xtra whls., snows, $2,900. MY 4-2544.

MERCURY: '63 Meteor, 2-dr. hdtp., pwr. steer. & bks., auto., radial tires, nw ball joints, bks., & shocks, ask. $300. PE 5-5205, after 5.

MISC.: Buick T-10, 4-spd., steel case, wide ratio, $125; dual quads from Chevy Corvette, manifold & carbs., $40. JU 5-8992.

BOAT: '68 Luhrs., 25 ft., fbgl., flybridge, dinette, galley, 210 hp Chrysler, f.w.c., bow rail, deck chrs., muff., depth find., 2 anchors, slps. 4, low hrs. on eng., $5,000. FR 9-2693.

SAILBOAT: Aux. sloop, 26 ft., fbgl. btm., decks, 8 ft. beam, 2½ ft. draft, SS rig, dacs, $2,800. 334-4757.

FORD: '70 Fairlane 500, less than 6,000 mi., stick shift, 2 snows, ask. $1,850. 921-4288, after 5.

DRK. RM. EQUIP.: Omega D2 enlarger, Kodak f4.5, 75mm Ektar lens dry., trays, trim. bd., safelgts., filt., spd. EZ-ELS, flood lamps, & more, $150. 472-0932, after 6.

MAGS: 4 Keystone, '58-'68 Chevy, Chevelle, '64-'68 Buick Spec., GTO, $60. LT 9-3145.

TIRES: 4 w/w Seiberling 8:25x14, less than 8,000 mi., $45/all. TU 8-7947.

TIRES: 2, G70/14 dual w/w Norwalk fbgl. belt snows w/studs, on Chevy rims, 14/32 tread remain., dynam. bal., $100. 271-4213.

DUNE BUGGY: Rdy. for Corvair or VW eng., full interior & dash-flake grn, $700. 271-2403.

ST. BERNARD: 16 mo. male, AKC, showdog, perfect mark., gd. w/child. SU 1-1795.

PUPPIES: Apricot poodles, toy & mini, AKC, $100/ ea. 888-7949.

TRUMPET: 1 yr. w/case, valve, oil, etc., $75. 265-7738.

OLQSMOBILE: '65 dynamic 88, 2-dr. blue conv., all pwr., auto., R&H, new tp., & exh. sys., $600. 212 343-9795.

CADILLAC: '67 Coupe de Ville, midngt, blue-blk. vinyl tp., blk. int., comp. pwr. access., new poly tires, $2,900. 248-0918.

MUSTANG: '71, V-8, pwr. steer. & bks., auto., cons., gauges, w/w wide ovals, $3,125. 929-4009.

For Sale

HOUSE: Merrick, col., 2 car gar., xtras, low 30s. FR 9-2996.

HOUSE: N. Babylon, 3 bdrm. hi-ranch, eat-in-kit., lrg. playrm., 2 zone oil heat, s-s, wash./dry., xtras, wlk. to shops & bus, $27,990. 667-6584.

HOUSE: Smithtown, lrg. 3 bdrm. ranch, 1 acre, 2 bath, din. rm., fam. rm. w/roman brick wall & firepl., foyer, eat-in-kit., lndry., sew., 2 car gar., $56,000. 724-7551, after 5:30.

HOUSE: Plainview mother/daugh., 6 rm. down, 3 rm. up, 2 kit., 2 full bath, 60x110, 24 ft. pool, xtras, $41,500. 931-4911.

JR. DIN. RM.: Tbl., 2 leaves, 4 chrs., antique wood fin. (formica), $85. 543-6634.

FURN.: 2 pc. French Prov. sect., champagne, plastic cov., best offer. 681-5440.

DIN. RM. SET: 72 in. tbl., 54 in. hutch, 6 chrs., all wal. formica, $150. JU 1-3584, after 6.

REFRIG.: 16 cu. ft. Gibson frost free, coppertone, $175. 286-3419.

MISC.: 12x12 rug, $25; 8x10 braid rug, $10; 8x10 hooked rug, $10; sleep couch, $20; couch, $20; chr., $10; tbls., $10/ea. 249-1095.

BABY CARR.: Bilt-Rite vinyl, matt. & basket, $25. 333-9893.

FISH TANK: 10 gal., std., pump, access., $20. 798-0009.

PUPPIES: Lg. hair. dachshund, sire tp. US champ, raised w/child. 757-8179.

PUPPIES: Gold. retriever, AKC, champ sire, shots, whelp. 6/18. 724-6068, after 6.

GERM. SHEP.: Male, 3 mo., AKC, champ line, $75. 864-6405.

PUPPIES: Amer. Eskimo, UKC, fem., $75, males, $90. 423-1893, after 6:30.

GREAT DANES: Champ sires, fawn color, paper trained, 5 wks., males, $200, fem., $175. 212 VI 3-5097.

PUPPIES: Gordon setter, show & field stock, whelp. 7/16. 588-0531.

PUPPIES: Doberman, AKC, blk. & tan, 11 wks., champ blood line, gd. temper., male & fem. 842-3327.

PUPPIES: St. Bernard, AKC, rough & smooth coats, pet & show qual., male, fem. 928-0183.

IRISH SET.: 8 mo., house train., papers, hi. spirit., $75 or best offer. 665-4008.

POODLES: Mini., AKC. 587-4097.

CORVETTE: '65 coupe, blue, 300 hp, 327 c.i., 4-spd., posi., low mi. 543-9321.

MUSTANG: '65, V-8, stick, $525. 368-4164.

VAN: '65 Dodge, new tires, bks., & alternator, $625. 798-5914.

CAMPER: '48 step van, Chevrolet, alum. bdy., fully equip., new eng., transmission clutch, bks., 9 tires. MO 9-8188.

PLYMOUTH: '62 Nat'l. record hold., 4 yr., 361 ci. torque flite, fully prepared. 212 347-6516, evgs.

REAR SHOCKS: Spec. hvy. dty. for '71 Ford, asks. $15. BA 3-4728.

CAR ACCESS.: 2 Cibie 35s driv. lamps, 1 plain, 1 fog, 175m candlepwr. w/stone shields, $40; Moto-Lite cust. lea. rim. steer. whl., flat blk. alloy steel spokes, w/hub, fits Lotus, TVR & Cortina, $30; Hahn hd. rest. 935-4467, after 5:30.

PICK-UP TRK.: '66, ¾ ton Chevy, hvy. dty., 4 new tires, & bks., R&H, 8 ft. camp. bdy., $950. 585-8110.

MISC.: '62 VW chassis w/front end & rear end, xtra parts, $50; '66 VW chassis only, $25. 226-5467.

MISC.: Starcraft camper, slps. 8, $1,200; Add-a-rm. for camper, $200; Coleman catalytic heat., 5-000-8,000 BTU, $20; pool liner for 24x4 pool, used 1 season, $80. 864-6484.

MISC.: 25¾ acres w/trlr., Del. County nr. Delhi & Oneonta (Bloomville), 460 ft. rd. front., 48 ft. trlr., 12 yr., bath, 2 bdrm., lvg. rm., kit. w/4 burner stove, oven, refrig., slps. 6, util., cement blk. foundation, cesspool, $11,000; sep. 10 acres, 460 ft. front., elec. avail., $4,000; all 35¾ acres w/trlr., $14,500. hunt., fish., ski. FR 9-5561.

STAMP: Argentina, Scott's 139-A67, invert, ctr., off ctr., valued $400, sell $45. 273-4278.

STATION: Comp. 2 meter, Ameco TX-62 transmitter w/Ameco 621-VFO; Drake 2B w/Ameco CN-144 converter, receiver, relay & cables incl., WB2ESD, $325. 781-5354.

MISC.: U.S. Divers Deepstar regulator, used 1 yr., $35; Healthways Scuba Star TD reg., $45. 671-8035.

AMP.: Fender deluxe reverb, 2 channel, 4 inputs, $110; 15 in. H.D. Jensen spkr., $25; 12 in. sound spkr., $15. TU 4-3934.

For Sale

MISC.: Excelsior chord organ, 40 reed, $175; Heath stereo amp., 28w peak, $45. 488-7197.

TRUMPET: Lafayette by Couesnon, 1 yr., w/case, $75. E. Napoli, Ext. 7165.

POODLE: Mini blk. male, pedigree, AKC, 1½ yr., housebkn., loves child., $60. 585-5426.

BEAGLE: 5 yr., tri-color., fem., spayed, AKC, gd. w/child., $25. 249-1018.

SURFBD.: 9 ft. 6 in., Gordon & Smith, $75. TU 8-3114.

MISC.: 28 in. bike, $10; 16 in. bike, $10; Coach carr., $25; stroller, car seat & bassinet, $10; fold. carr., $10; play pen, $10; birch crib, $15; hi-chr., $10; 31x80 storm dr., $20. 621-3734.

BICYCLE: 26 in. boy's Schwinn, ask. $25. AT 6-1197.

MISC.: 2 bikes, 16 in. Schwinn; 20 in. Schwinn, $20; G.E. dryer, $45; steel bd. frame for dbl. bd. 541-6940.

BICYCLE: 20 in. girl's Stingray Barracuda, $20. CH 9-4007.

KARMANN GHIA: '66, AM/FM, Pirelli tires, nds. repairs, $200. 212 461-5174.

DODGE: '70 Challenger R/T, yel. w/blk. vinyl roof & int., 383 mag. V-8/335 hp, 4-bbl. Holley, Torqueflite auto., xtra hvy. dty. susp. Rallp whls., disc. bks., 14,000 mi., xrtas, $2,950. 798-4652.

SEAT COV.: New, for Mustang, '63-'65, ask. $30. 587-4413.

VW: '64, blk., red int., R&H, valves ground 8/1/71, $700. 669-6194.

FIREBIRD: '68, air cond., 29,000 mi. 249-4897, after 6.

OPEL KADETT: Yel. sport coupe, 7 new w/w & snows, new bks. MO 9-7735.

CHEVY II: '62 sta. wag., auto., radio, $125. 427-7664.

OLDSMOBILE: '66, 442, auto., mags, etc., $1,100. TU 8-3114.

KARMANN GHIA: '69, AM/FM, ski rack, new bks., $1,800. 368-5391.

DUNE BUGGY: Fbgl., ant. brwn. metalflake, '70 eng. w/hdrs., low mil., air shocks, formula V shift, full inst., 11 in. rear tires/rims, xtras, ask. $1,500. HA 3-0351.

MINI BIKE: Bonanza, 4 hp Tecumseh eng., $140. 324-9042, after 6.

MAG WHLS.: Set of 4 Amer. w/G:70-15 wide ovals, 15 in. polish. alum. whls. fit GM's, lugs & locks, all mtd., $180 or best offer. 427-1229, evgs.

SAILBOAT: Sunfish, '71 sail & tiller, $350. 798-5459.

OUTBD.: '69 Evinrude 1½ hp, gd. for pram, $75. 261-0671.

POOL: 18x33x4, 1 hp fbgl. sand filter, 20 gauge liner w/20 yr. guar., redwood deck., ladder & winter cov., 1 yr., $925. 669-5059.

RESTAURANT: Suffolk's North Shore, serv. bar, gd. lease, $15,000 down. 473-4000.

PROPERTY: S. Great River, 100x356 ft., Wood Hallow Rd., $14,000. JU 1-3584, after 6.

CHEVROLET: '63 Biscayne, 6 cyl., stick, 2 snows w/rims, $200. 234-5402.

VW: '66 Fastback, $800. 212 EV 2-4361.

UTIL. TRLR.: 5x9 ft., all steel struct., 5 ft. steel sides incl. canv. tp., 1 yr., 3,000 lb. cap., $850. 731-0730.

HOUSE: Massapequa, legal mother/daugh., 3 bdrm. up., 2 add. bdrm. apt. down, sep. ent., bath & kit., all brick, firepl., 100x100, fully lndscpd., $200/mo. rent., take o'6% mtge., $36,000. 799-8788.

HOUSE: Jericho, 8 rm., 3 bdrm., 1½ bath, att. gar., fenc. in bk. yd., fin. bsmt. w/bar, playrm., opp. sch., nr. RR & Mid-Isl. Plaza, $37,200. 433-3059.

HOUSE: Commack N., cedar & brick 3 bdrm. split, fam. rm., 1½ bath, lrg. patio, w-w, s-s, o.h.w., prof. lndscpd., 1/3 acre, 6% assum. mtge., $36,000. 864-6945.

MISC.: Wh. prov. desk & chr., & ngt. std., $25. PY 8-4258.

STOVE: '70, 36 in. G.E. elec., wh., $125. PY 6-7496.

KIT. SET: Wrough iron tbl., 42x60 w/leaf, 4 chrs. w/blue seats, $30. PY 6-8687.

MISC.: Danish mod. din. rm. set, tbl., breakfront & server, 6 chrs., $325; 3 pc. Naughahyde sofa & grn. lea. chr. w/otto., $15. 822-6892.

PROPERTY: 1/3 acre on cul-de-sac, Pocono Farms, Pa., golf course, pvt. lake, country club, tennis courts, horse-bk. rid., $8,000. 724-8234.

MISC.: 16 in. conv. bicycle w/train. whls., $14; Singer sew. mach., port. w/btn. holer, $25; 2, 14 in. Ford rims w/snows, $10. MO 6-8981.

BOAT: 16 ft. fbgl. Elgin, '62, runabut & trlr., Navy tp., steer. & elec. start., moor. stor. cov., xtras, 40 hp motor nds. work, $400. 271-6054.

For Sale

MISC.: U.S. Proof & proof like mint sets: proof &; proof like mints, from '60- '71. IV 6-3713.

KITTENS: Himalayan Persian type, blue eyes, seal pt., $75/ea. 666-6996.

STA. WAG.: '69, 9 pass. Chrysler Town & Country, pwr. steer. & bks., air cond., auto.. elec. rear wind., new disc bks., tires, & batt., $2,800. WA 2-4347.

OPEL: '69 GT, red w/blk. vinyl int., AM/FM, $2,200. 421-3469.

VW: '69 Bug, radio, new w/w & bks., $1,295. JU 1-9290.

VW: '66, blue, AM/FM, roof rack, rebit. eng. 928-0711, after 4.

CHEVROLET: '68 Nova, blue 4-dr., pwr. steer., air cond., V-8, low mi., $1,750. 798-5175, after 5:30.

PONTIAC: '69 brougham, 4-dr., full pwr., Cruisamatic, 4 new tires, mag whls., disc bks., tilt whl., vinyl tp. 427-7978.

MISC.: '62, 4-dr. Corvair Monza, 35,000 mi., rebit. transmission w/22,000., $100; Corvair auto, transmission w/30,000 mi., $35. 269-6037.

MISC.: '67 VW, orig. owner, $1,095; 21 in. RCA, B&W TV, cons., $50. 724-0743.

SPORTSTER: '69 Harley Davidson, $1,995. HA 7-0245.

TIRES: 4 w/w Seiberling, 8.25x14, less than 10,000 mi., $45. 888-7947.

RADIOS: CBS, 2 Poly-con, equip. & ant. 427-7978.

MISC.: 500TX AM/FM Fisher stereo, 200w receiver, new wal. cab., RK 30 remote control, $350; 2 cu. ft. Sears bar refrig., wal., 1 yr., $40. CH 9-7034.

MISC.: Epiphone 12-string acoustic, guitar, adj. bridge, $100; left-hand. Gretsch dbl. anniversary elec., $100. 744-6164, after 6.

PONTIAC: '65 Catalina, 4-dr., auto., pwr. steer., $525. 433-6108.

MERCURY: '70 Montego MX, 4-dr. sed., blue, auto., V-8, 302, air cond., pwr. steer., xtras, $2,595. 691-2807.

FIAT: '61, 1200 sport coupe, nds. eng. work, spares avail., short block, gens., carbs., tires, transmision, winter roof, blt. in tow bar, other features, $175. 473-3854.

MGBGT: '70, blue/blk. int., 4-spd., rear defrost., radial tires, $2,750 or best offer. G. McMahon, Ext. 7146.

MOTORCYCLE: '71 Honda SL-100, 4 mo., low mi., 100cc, 4 stroke, o'hd cam eng., full lgt. & elec. for st. use, raised fenders, lrg. tires for trail, 5-spd. gear box, fully adj. shocks, $425. 249-7281.

CAMP. TRLR.: '69 Apache Mesa I, 8x17, canopy, icebox, stor., spare tire, heater, pvcy. curt. 796-7536.

BOAT: '60, 19½ ft. Amer. Finn, 80 hp rebit. Evinrude, xtras, $800. 691-2807.

BOAT: '62 Amer. Finn lapstrake, 20 ft., '62, 75 hp Evinrude, elec. start & pwr. tilt, xtras, in water, best offer. 293-8983.

BOAT: '70, 14 ft. fbgls. MFG w/18 hp Johnson outbd., $550. AM 4-0924.

SAILBOAT: Schock 25, LOA 25 ft., keel, fbgl., Genoa, main, jib, spinaker dac sails, 2 bunks, hd., 3 hp Evinrude, fold. yachtwin, 8 cushions, cockpit cover. 751-0959.

SAILBOAT: '64, 26 ft. Ariel, Pearson blt., slps. 4, comp. equip., ask. $6,000. HA 7-8947.

MFG: '68, 12 ft. w/18 hp Evinrude, deck, steer. wh. & controls, $450. 473-3854.

BOAT: '68 Starcraft, 15 ft., '69 Evinrude, 40 hp, steer., cont., ask. $950. 427-7998, after 6.

CAB. CRUISER: 29 ft. Pacemaker, 135 hp Chrysler, S/S, slps. 4, galley, new hd., ask. $3,000. 588-5349.

BOAT: 23 ft. '69 Seabird, inbd./outbd., skiff, Navy tp., f.w.c., xtras, ask. $5,500. 587-7926.

BOAT: 12 ft. fbgl. w/oars, etc., boat trlr. w/lgts., winch, etc., 1½ yr., $250. 669-2345.

BOAT: '70 Larson, 18 ft. Shark, fbgl., 115 Johnson Electrimatic, bilge pump, tach, Navy tp. & canv., C.G. equip. 567-1121, after 5.

BOAT: 27 ft. Ulrichsen, hdtp. Sea Skiff, Palmer f.w.c., 2 Monel gas tanks, 423 hrs., in water, N. Shore dock. incl. WA 1-2470 ngts.

MARINE ENG.: 185 hp Chris Craft 2½ to 1 hydraulic transmission, $500. 878-2588.

ANCHORS: Used, all sz., reason. PE 5-1637.

AIRPLANE: '56 Cessna 182, 230 cont., 600 SMOH, MK 12, MK 2, Lear ADF, EGT, full panel, fresh annual, Inst. cert., $7,495. 822-6271.

BIKE: 26 in. boy's Rollfast, $12. CH 9-1019.

BIKE: 20 in. boy's Stingray, 3-spd. stick shift, Schwinn, blue, $40 or best offer. PY 8-4708, after 6.

HOUSE: Oakdale, 7 rm., w-w, dishwash., gar., ½ acre, Fla. rm., s-s, full bsmt., $27,000. 567-2798.

For Sale

BIKE: Sears Spaceliner, 26 in. chrome, new tires, ped., speedom., gen. hd. & tail lgts., 5 yr., ask. $40. 231-8733.

HOUSE: Bethpage Estates, mother-daugh., 3-5 bdrm., ¼ acre, cent. air cond., $49,900; bus. prop., ½ acre Shirley, $4,900; home ent. ctr., 23 in. TV, radio, stereo, AM/FM, $150. 938-6140.

HOUSE: Copiague, 60 ft. bulkhd., Swiss chalet type, brick firepl., 3 bdrm., 1½ bath, fam. rm., o.h.w., 2 car heat, gar., sod lawn, auto. sprink. sys., $39,000. 226-7885.

HOUSE: Glen Head, 6 rm. ranch, 2 yr., 1½ bath, fin. bsmt., air cond., s-s, low tax. OR 6-3625, after 6.

HOUSE: Amityville waterfront, lrg. plot, brick, 4 bdrm., 2 bath, huge fam. rm. w/firepl., cathedral ceil. liv. rm., & frepl., full bsmt., 2 car gar., $49,500. AM 4-1864.

HOUSE: N. Great River, 2 lrg. bdrm., lrg. bath, 1½ car gar., semi-fin. bsmt., s-s, 8 in. thick walls, low tax., ask. $23,000. 234-3620.

HOUSE: W. Babylon, 6 rm. cape, bsmt., dbl. lgth. gar., 70x100, nr. elem. sch., & Great So. Bay shop. ctr., appli., furn., $30,000. 661-3744.

HOUSE: Commack, nr. LIE & N. State Pkwy., 3 bdrm., 1½ bath, birchwood split, roman brick wall w/firepl., lrg. liv. rm., & kit., dinette, formal din. rm., w-w, appli., den, fin. bsmt., pvt. formal garden w/waterfall, $35,000. 543-7211.

HOUSE: Levitt 5 bdrm. ranch, dbl. dormers, 2 bath, gar., aid cond., w-w, firepl., wlk. to stores, $33,000. PE 1-4815, after 5.

HOUSE: Medford, 3 bdrm. hi-ranch, din. rm., lrg. playrm., 2 car gar., sundeck, pool, fenc., w-w, fully lndscpd., $23,990. AT 9-1836.

HOUSE: Musket Ridge in Coram, 3 bdrm. Dutch col. on treed 1/3 acre, 16x24 deck in bk. of fam. rm., din. rm., 1½ bath, space for 2 or more rms. in unfin. area above gar., $28,500. 732-5076.

BCH. HOUSE: Saltaire, Fire Isl., 6 rm., red wood beam. ceil., firepl., tile bath, furn., $35,000. MO 5-7613.

HOUSE: Brentwood, 3 bdrm. ranch, 1/3 acre, 3 yr., gar., full bsmt., panel. eat-in-kit., 4 appli., flagstone entry huge patio w/wrought iron rail., fully lndscpd., s-s, $28,500. CU 5-7488.

HOUSE: Rocky Pt., 3 bdrm. ranch, country kit., fin. bsmt., s-s, gar., fully lndscpd., xtras, 744-8418, evgs.

HOUSE: Jericho sch. dist., 7 rm. split, 3 bdrm., 1½ bath, fin. bsmt. & bar, attach. gar., patio, opp. sch., nr. Gertz shop., $37,500. 433-3059.

PROPERTY: Clinton County, N.Y., 10 acres, Rte. 189, wood., evergrns., hrd. surf. rd. front., elec. & tele. avail., ½ mi. town (Churubosco), $1,875. 293-9594 bet. 7-10 p.m.

HOUSE: E. Northport, 3 bdrm., 2½ bath, liv. rm. w/firepl., w-w, din. rm., Fla. rm., 2 car gar., 1 acre, Half Hollow Hills sch., xtras. 864-5681.

HOUSE: Roslyn Hgts., 7 lrg. rms., jalousie Fla. rm., 2½ bath, panel. bsmt. incl. wet bar, exp. attic, w-w, air cond. liv. rm., patio, 2 zone o.h.w. heat, circ. drive., ask. $54,900. 621-3734.

COUCHES: Rattan, 2 pc. sect., grn., $50. 212 IN 1-4142, after 6.

COLOR TV: 25 in. Sylvania, tbl. mod., ebony fin. w/wal. roll-about std., nds. tuner, $195. 212 774-4889.

MISC.: Elec. roaster, $10; Mixmaster w/juicer, $25; knotty pine gun cab., $95; 2, 16x16 tarps, $10/ea.; ¼ in. elec. drill, var. spd., $20. 757-2141.

SEW MACH.: Portable, $20. 724-4797.

TV: 19 in. G.E. port., B&W, new low volt. pwr. supply, $40. 543-2423.

MISC.: Sew. mach., $25; kit. set, $15; sgl. maple bd., $15; storm windows, $30. OV 1-6271, after 6.

MISC.: World War I, N.Y. Times mid-wk. pictorial, 1913-1919, prof. bound, 9 vol., $1,500. O. Sentenac, Ext. 9616.

KONICA: 135mm f3.2 auto. Hexanon EE, new, w/case & guar., $85. 212 923-8509.

DOORS: Slid. glass, thermopane 6x6½, $50. 543-3221, evgs.

FL. WAXER: Comm. sz. w/2 brushes, xtras. 735-0035.

MISC.: Oil tank, 275 gal. cap., & 125 gal. of oil, $25. AN 5-1041.

SNOW SKIS: Kneissl super Wh. Star, 210cm, Nev./Grand Prix bind., $125. 288-6095.

STAMPS: Worldwide, arranged stock pgs. & in glassine envelopes, maj. w/ catalog # gd. appr'vl. & retail mat'l., $185. PE 5-7082.

Greenland landscape. Stark and bare, Washington Land, at the northwest corner of Greenland, never manages to look very hospitable. This area was part of Grumman Ecosystems' magnetometer and photographic survey, May to August, in search of oil and mineral resources. (Photo by 'Red' Hafter)

Ecosystems team finds top of the world 'awe inspiring'

"The sun shone all the time we were there, around the clock. We lost track of which was day and which was night," said Bill King of Grumman Ecosystems Corporation. "In Thule you knew it was morning when they served bacon and eggs. We had to cover the windows to help us go to sleep."

Grumman Ecosystems took its Gulfstream I to the top of the world recently to make an extensive magnetometer and photographic survey of the northern rim of Danish-owned Greenland. They were under a contract to a group of Canadian, American, and Danish businessmen, the Greenarctic Consortium, who are interested in the oil and mineral potential of Greenland. Ecosystems' bases of operation were the U.S. Air Force base at Thule, late May to early July; Station Nord, July; Thule again in early August—the whole time well above the Arctic Circle.

"We accomplished what we set out to do, and we got all the data that was requested," reported Tom Attridge, Vice President of Ecosystems. "The data is being interpreted now, in Plant 4, and our report is due in November."

"It was a successful project and a credit to the men who performed it, as well as to all the Grumman Companies. The Gulfstream I is a helluva good airplane—we had only minor problems," said Bill Schwendler Jr., Executive Vice President of Grumman Ecosystems. "It flew about 50,000 data miles and put in about 500 hours of mapping time. That plane covered over 100,000 nautical miles. It's now undergoing a general rework in Plant 4, preparing for its next job.

"We hope to be back to Greenland next summer doing work for the Consortium—and possibly for the Danish Government," Schwendler added.

The Ecosystems' Greenland survey covered three months, and 11 men went from Bethpage. Their gear and supplies filled up the Gulfstream I, so a Gulfstream II went along to carry most of the staff. One of the logistics problems was that they had to supply their own fuel for operations out of Station Nord. The fuel—55,000 gallons of it—was delivered from Tromso, Norway, in drums. At Station Nord, 1,000 miles north of the Arctic Circle and often called the Top of the World, Ecosystems personnel had to transfer the fuel from the drums to storage tanks, then into the airplane.

A glance at a world globe shows Thule almost due north of Long Island, a five-hour flight by Gulfstream II from Bethpage. The survey covered parts of the east, north, and west coastal areas of Greenland.

'Awe inspiring'

"The country was awe inspiring," Walter Berndt said. "There were snowstorms and heavy winds in June. The only vegetation was a little plant called arctic cotton and some little red flowers. It's very stark. In May the ground was snow covered. Later, after the snow melted, most of the landscape was brown."

Joe Martinez' comment was, "The 30 to 45 degree arctic summer didn't cause discomfort. But, with the west wind whipping in off the bay on one side of your face and the sun shining brightly on the other, you really knew you weren't at home."

At Sondre Stromfjord Air Base 600 miles south of Thule, "mosquitos were very big" in the 50-degree heat.

Food? Good at Thule, lots of it at Nord, including some Danish specialties. "We gained some weight at Thule and even more at Nord," said one.

The Ecosystems staff included "Red" Hafter, program manager, and Bob Pate, chief of data reduction. On site the full time were Walter Berndt, chief pilot and on-site manager; Mike Tenzyk, pilot; Hal Smith, co-pilot on loan from Aerospace; Bill King, plane captain; Bucky Weaver, assistant plane captain on loan from Aerospace; Joe Martinez, photographer; Stanley Pokora and Jim North, magnetometer operators; Glen Bach, ground data analyst; and two non-employees under contract to Ecosystems.

While this group was away, Attridge reports, ground personnel at Plant 4 completed analysis of the data collected last spring for the New York Corps of Engineers on harbor pollution and that is being reviewed by the Corps at the present time.

Six get new assignments in Company; Cipp to set up 'quick response' facility

New assignments often go with promising developmens in the Grumman business outlook. Joe Cipp, for example, has been named to Vice President Tom Johnson's staff, and among his duties will be the establishment, within the Product Manufacturing Department, of a low-cost, quick-response capability for prototype, mockup, or "one of a kind" articles. The STOL Gulfstream, if Grumman gets a go-ahead, would be one of these. Cipp is in Plant 2 on Ext. 2572.

Bob Mullaney, formerly F-14 manager of Operations, is now special assistant to John O'Brien, Administrative Vice President. Mullaney is in Plant 5 and can be reached on Ext. 3307.

In Manufacturing Engineering, Paul Kanzler is now manager of Tooling & Methods, Plant 2, Ext. 3548. He was formerly deputy director of Materials & Process Engineering. And George Tiber, previously deputy director of Production, has been named manager of Tool Fabrication. He is also in Plant 2, on Ext. 1947.

Artie August is the new director of Advanced Development, Plant 5, Ext. 9774, succeeding Bob Bower, who has moved to NASA-Langley Research Center as director of Aeronautics. Walt Ludwig is appointed manager of Spaceplane-associated Advanced Development activities. He is in Plant 25, Ext. 7040, and he reports to August.

Establish new board

A Facilities Operations Review Board, formed to review all formal requests for services from the Facilities Engineering & Maintenance organizations, has been established with these members:

Tom Cunniffe, Facilities Engineering; John McNamara, Facilities Maintenance; Ray Nightingale, Operations Planning & Budgets; George Bilzi, Accounting; Al Mead, Fixed Assets Committee; Bill Steenson, Resources Staff. They report to John O'Brien, Administrative Vice President.

Joe DiGiacomo has been named manager of Accounting for Grumman Data Systems. He is responsible for implementation of accounting policies and practices and the maintenance of all accounting costing records. His extension is 1964.